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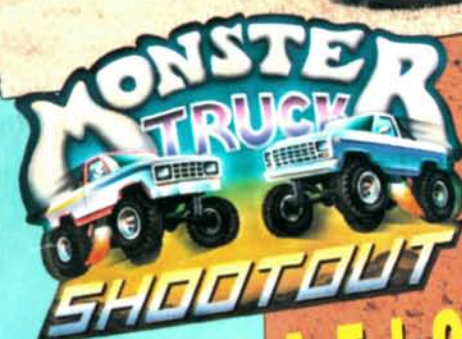
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May 1988

Radio Control CAR ACTION



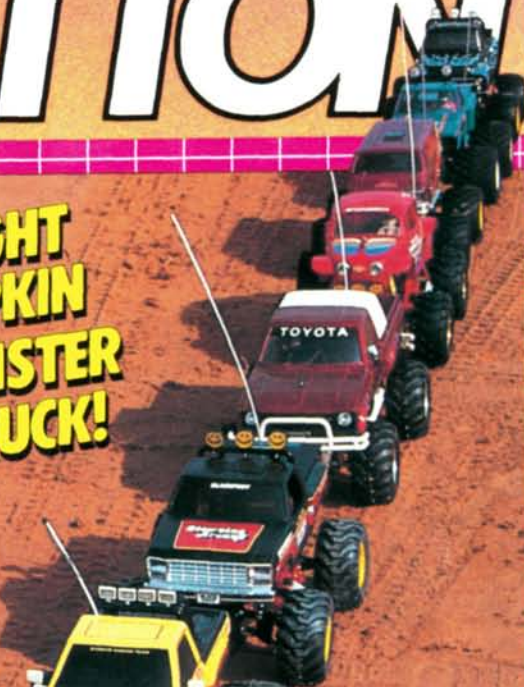
**MIDNIGHT
PUMPKIN
MONSTER
TRUCK!**



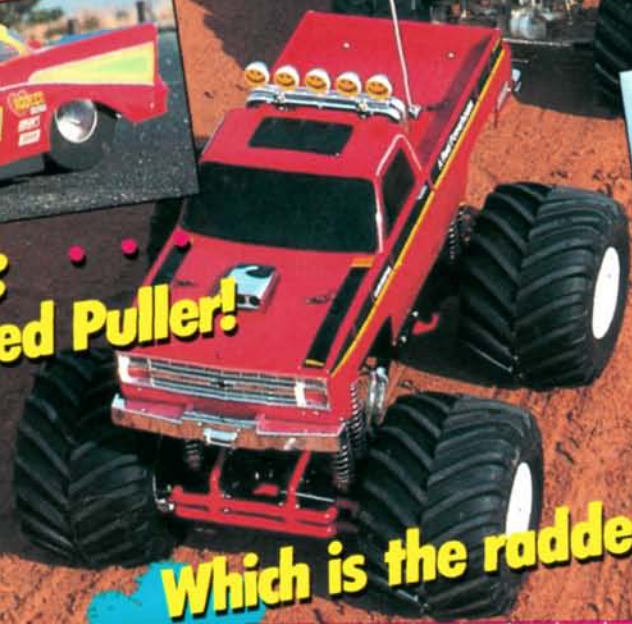
**OPERATION
SLY FOX**



**WICKED:
'57 Chevy Sled Puller!**



**"How To"
WILD
Airbrush
Paint jobs**



Which is the raddest Monster Truck?



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May 1988



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Cover: A rare sight: monster mashers on their best behavior all in a row. Shortly before the cacophony starts, it's the danger-zone parade. The Tamiya Pumpkin (upper left) is, according to many, the best-looking rock-and-roll funster around. Maybe that's why it spends most of its time with its nose in the air (a la wheelie). Bottom left is Eric Goldschrafe's muscular carpet puller, the Rug Rat. Photos by Steve Pond and Eric Goldschrafe. So sorry! So sorry! Last month's cover was designed by Alan Palermo and photos were by Alan and Steve Pond. Please forgive me, guys. I accidentally inhaled too much ozone from arcing motor brushes, so, needless to say, I was floating in the ozone — Chris

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EDITORIAL

by LOUIS V. DeFRANCESCO JR.

JUST A FEW SHORT years ago, a young man called Bob Chandler introduced a new type of truck that would impact four-wheel-drive pickups like nothing ever before. His ride was an F-150 Ford pickup which sported huge, 66-inch terra tires, military axles, a blown big-block engine and trick suspension. He called his blue creation "Big Foot," and the rest is history. This craze immediately swept the country and is still going strong.



As we've well learned, what is usually popular in full-scale automotive circles is also manifest in our radio-control world. It seems that, of late, manufacturers are introducing many new monster trucks and after-market parts. As I write this, I know of three new R/C trucks that you'll see introduced in the next few months, and there are even more on the horizon! As Executive Editor, Chris "Squirrel" Chianelli mentioned in our last Letters column, there has been a tremendous demand by you readers for a monster-truck shootout. Ask and you will receive! We packed our bags and headed for the Sunshine State with nine of the most popular monster trucks and let them go at it head-to-head. We devised a test system with point accumulations, so as to be as objective as possible. Our testing included sled pulls, top speed, duration, handling and acceleration, as well as price. You'll see the strengths and weaknesses of all the trucks, but it's *you*, the R/C modeling consumer, who should decide which truck will best suit your needs.

Now, if you're wondering where all those wild trucks ended up after the testing; Associate Editor, Steve Pond, has hoarded all of them, and he was last seen at the mud bog causing a fiasco with the nine monster mashers!

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Letters



Fred Hits It On The Head!

With reference to Fred Murphy's February '88 article, "What Kind of Car Should I Buy?"—I have a one-word comment—*amen!* Mr. Murphy's article echoes what I've been saying to my customers for three years.

Proper research by a prospective customer will prevent frustration and disappointment and will result in many years of radio-control enjoyment.

KEITH DEMMERY
London, Ontario, Canada

Fast Brute

I stalled on deciding what vehicle I wanted next until I picked up my first issue of *RCCA* in December. I was impressed with, and bought, the Big Brute. I took your suggestion and put the LeMans 360ST motor into my truck. I was shocked at how fast this monster truck could go!! Where can I get a wheelie bar for Brute? Also, I ran the Brute through a puddle of water. Will this shorten the motor's life? Thanks.

BOB KINGDOLLAR
Lowell, IN

Bob, I'm glad the Brute with the 360ST has lived up to your expectations. The Brute is so new at this point that I don't know if a wheelie bar is available. Fresh water (as opposed to salt water) won't hurt your motor, but you may still want to use one of the foam end-bell caps to keep out the dust and dirt suspended in the water. However, though the Brute's chassis helps protect the radio from the elements, it's still a good idea to keep the car as dry as possible. If you often run in an area where your truck will get wet, wrap the receiver in plastic. If things do get wet, dry them off with a blowdryer as soon as possible.

CC

All Fed Up

I was reading the "Hobby Lobby Tornado" article in the December '87 issue of *RCCA*. I bought a Hunter in May '87 and have only been able to run it about four times; I can't get it started. I do everything by the book and have tried just about everything, but the thing has a mind of its own. One day it will start right up with a crank of the starter. Then there are days when the starter becomes too hot to even hold in my hand. I use a 15 percent cool mix and a Sullivan Deluxe high torque, high rpm 12V starter. I have an O.S. Max .21 SE-B engine with slide carb. Please help me out. Thank you.

NAEEM ZAKARIA
Gainesville, FL

Naeem, if the motor has fuel in the cylinder and you have a good hot plug, the thing has to fire up. A hot plug is one of the keys. Most problems stem from having a mediocre starting battery. The plug must glow bright yellow, and not dull orange. A fresh Ni-Cd setup is the way to go. Next is the plug. Try a new plug in your troubleshooting procedure; it's one of the first things I try when experiencing any motor problem—even poor idle. Sometimes a plug will glow, but still not perform at 100 percent. Also check for a clogged fuel-delivery system, including the needle-valve spray-bar assembly. Prime the engine through the carb and, if you overdo it, you'll hear a hissing when the exhaust port is open. This is the hot plug burning off the fuel. Hold the car so that the engine exhaust port is facing the ground in the open position, and let the extra fuel run out while the plug is burning off the extra fuel. Buy a new starter battery, and don't get discouraged! CC

(Continued on page 12)

MRC Needs SALES ORIENTED, HOBBY-WISE INDIVIDUALS

We need a creative sales person to sell to our established customers. You'll be expected to plan promotions and create marketing proposals to increase business. Phone sales experience helpful. Familiarity with R/C products and hobby trade a plus.

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Letters



(Continued from page 10)

Satisfied Customer!

I'm writing this letter in response to "Dubious Dealing." I bought a Monogram 4WD Tornado and have had it for about a year now. I haven't had any trouble with it. Right now, I'm putting on oil-filled shocks, ball links and adjustable turnbuckles.

Would you do an article on the Tornado? I think it's a winner. Your magazine is the greatest thing in the world.

DOUG WINKELMAN
Harvard, IL

Doug, yours truly did a review on the car in the April '87 issue of RCCA. I also found the car to be very rugged, with a lot of potential for a ready-to-run car.

CC

Mushy Brute

I'd like to commend you on the excellent job you're doing. You have the best R/C car magazine on the market. I have a few questions about the Kyosho Big Brute. I'm having problems with sagging in the rear end. The Brute's fitted with a set of Gold Option House Shocks. I have Gold springs on each shock as well. I can't recall the viscosity of the oil that I put in the shocks. The problem is that when I push down in the rear, it won't bounce back up. Should I purchase a heavyweight oil?

Also, I'd like the car to go much faster. The hobby store recommended a LeMans 480T motor. What do you think? Keep up the good work.

JEFF JENKINS

Jeff, in my review of the Brute, I also used the Option House long, Gold shocks with the heaviest springs (the bronze ones) set at the stiffest setting, and my Brute performed very well in off-road conditions. Keep in mind that when you compress the suspension on a monster truck and spread out the rear wheels, the static traction of the large tires sometimes prevents the suspension from returning to

full extension. I'm sure that if you drove the car after compressing the suspension, it would return to the original position. This will be less likely with a trailing-link suspension setup, though not necessarily better. Oil viscosity will only affect dampening, not spring-loading. The 480T ("T" standing for "torque") would be a good choice, so would the 360ST, which is more cost-effective as well.

CC

Rocky Speed Controller

Radio Control Car Action is great and very thorough. You have great pictures and track reports.

I have a Rocky 4WD, 1/10-scale off-road car and I think it's great, but the speed control seems unstable and susceptible to breaking. I'd like to know what the best electronic speed control(s) would be for my car. I have a very tight budget, so could you suggest something that costs under \$100.

Keep up the good work, and thank you again!

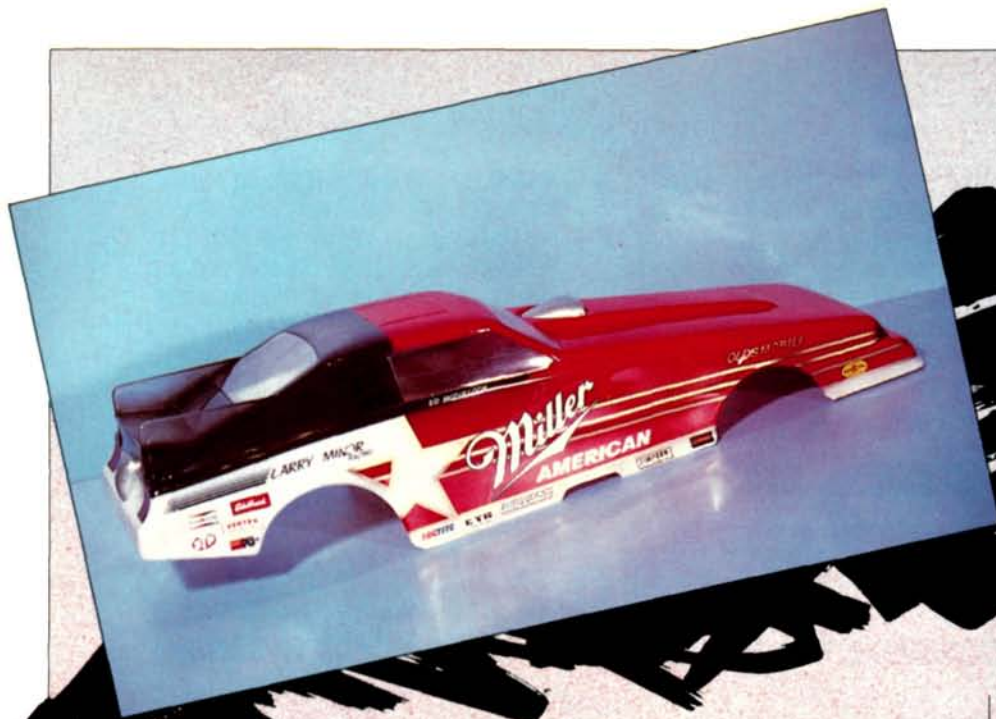
TIM WINTERHOLTER
Upland, IN

Tim, let me first say that I think Kyosho cars are excellent and very innovative. But one problem that many fellows are having is with the plate speed controller. I call it the spot-welder special. With all the fantastic advancements Kyosho has made in design and materials, even in their very inexpensive Raider, it perplexes me why they have not done away with this unit. No big deal; most of us replace the stock unit we get in a stock car with a better unit anyway. We'll be doing a speed controller update in the near future, since so many new offerings are out there. BoLink and Parma make a very rugged wiper-style with reverse switch (optional use).

CC

We welcome your comments, and suggestions. Letters should be addressed to "Letters," Radio Control Car Action, 251 Danbury Rd., Wilton, CT 06897. Letters may be edited for clarity and length. We regret that due to the tremendous amount of letters we receive we cannot respond to every one.

S AIR



by PHIL SROKA

P AINT! A COVERING to protect exposed materials from the elements. This is the main purpose of that special color on your car, but it's also used to make a statement. The artists who use automobiles as rolling canvases to demonstrate their talents are using color to make bold statements. These people make a very good living using their artistry to create vivid, eye-catching moving masterpieces. Racers paint their cars to show sponsorship and to please the fans.

The great increase in various types of R/C racing provides an opportunity to select and copy the car that most appeals to you, whether it's Petty's stock car, Sammy Swindel's sprinter, an off-roader or your favorite drag car. I'll show you how easy it is to

duplicate the color scheme of your chosen car.

The availability of Lexan bodies (thanks to Parma*, McAllister*, BoLink*, etc.) makes it easy to copy any car. Once you've chosen a car, you'll need several pictures of it. Automotive magazines are the best source of these, and shots taken from several angles will be needed to produce the best copy.

Next, think about the availability of graphics. Companies such as Autographics* and Parma produce copies of the popular graphics used by major racers, and these are a great help. Airbrushing produces the best results, because you can mix and create the colors you need.

Study the photos of your chosen car, examining the stripes and designs to be copied. Attention to detail will



Equipment and materials used: Badger spray equipment, 3M Fine Line Tape and Coverite Graphics stars.

produce the best results, so look carefully at insignia, lights, rivets, etc.

Weight is crucial, and headlights and grills increase the weight and destroy the aerodynamics of your car. These features can be made to appear magically by the hands of a talented painter. They look real and only add a fraction of an ounce to your car's weight. Even a relatively inexperienced painter can use shading techniques to produce dramatic and realistic results.



Before spraying, a Tamiya Paint Pen was used for detailing the injector scoop and parachute.



After masking the areas not to be sprayed, the first color was applied in several coats, being sure to keep it even.



After the first color was completed, white was used to back the color. This brightens the red and prevents other colors from bleeding through.

CALE BRUSH TECHNIQUES

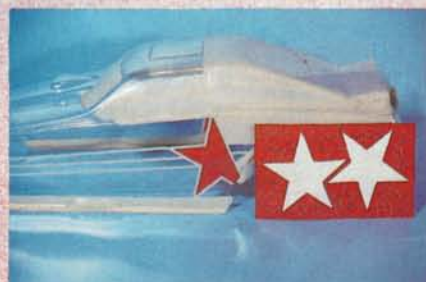
Embarrass The Competition With The Raddest-Looking Car At The Track!



Body and paint from Parma, first-rate quality for duplication.



Racing magazines such as Super Stock are excellent sources for photos to copy most subjects.



Showing how Coverite graphics stars were used to accomplish a design based on a star. Worked great!

My selected project was Ed McCulloch's Olds Firenza Miller funny car. The paint job is based on a star design which would be hard to tape evenly but, with Coverite's* graphic stars, I produced the design with a minimum of work.

First, study body lines, lights and windows, using them as guides for the stripes and designs. Fine-line tape from 3M comes in an assortment of sizes down to 1/16 inch, and will help you to duplicate virtually any scheme.

Once taping is completed, you must copy the colors. Parma makes this easy with a selection of colors to copy most subjects. If the color you need isn't available, make it by mixing. In my case, Parma's dark red was closest, but needed to be lightened a little by adding orange.

Experimentation will sometimes be necessary to produce just the right color. Experience will also be gained by this. Many beginners think that adding white will lighten a color. It

will, but it will also change the hue. White will lighten blue, but will also alter the color; silver will just lighten it. Orange or yellow will lighten red. If too much white is added, some of the original color can be used to darken the mixed color.

Before spraying, thoroughly clean the inside of the body with R&M PreCleano. Buy this, and 3M's fine-line tape, at automotive paint suppliers. Dry the body with a clean

(Continued on page 66)



When removing the tape, always pull toward itself to prevent lifting or overhang of the paint.



With the tape removed for the third color, one can begin to see resemblance and detail.

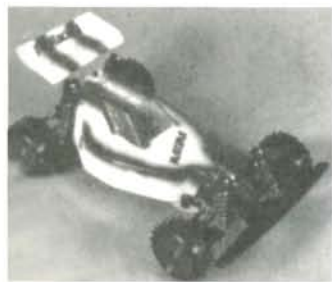


When painting is completed, the outside of the body should be wiped off with alcohol to remove overspray and fingerprints, while also leaving body prepped for stickers.

The Inside Scoop

by STEVE POND

THE R/C CAR industry is rapidly advancing, with new products being offered at a head-spinning rate. So, I'll make manufacturers nervous, but feed you R/C squirrels who are hungry for info, by bringing you a special report on security leaks and "late-in" items. Here goes!



PB MAXIMA

FROM THE LAND of tea and biscuits, comes news that our faithful Sherlock Holmes has uncovered a new ed of PB racing machine called the Maxima. The Maxima is an off-shoot of the PB Mini-Mustang, but has some noteworthy refinements that might make this a front-runner. New to the Maxima are all-new lower wishbones, new axle blocks, adjustable top links and universal joints similar to those used on the Kyosho racing cars. As soon as we hear more, you will!

NUREMBERG NEWS! A real departure for Tamiya is the all-new, high-tech, mid-engine belt drive Avanti. Tamiya has spared no efforts in creating this superb off-roader. Stay tuned...!

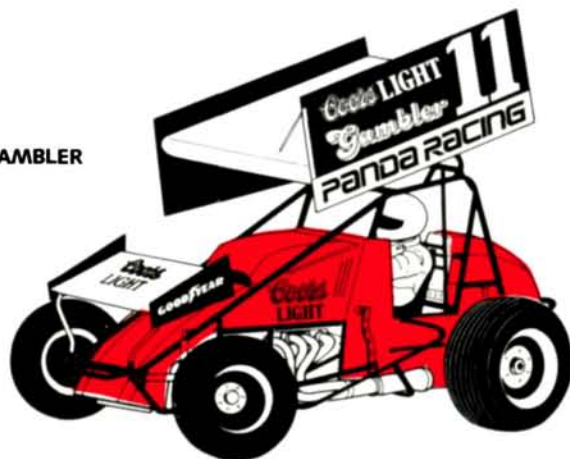
FLASH! A LATE-IN REPORT on the U.S. Winter Off-Road Championships tells us that a Trinity-powered Ultima, piloted by Mike Burnette, has grabbed first-place honors in the two-wheel class. Four-wheel-drive victory was clinched by Butch Kloeber with his new Yokomo C4, powered by a Reedy Ultra. Looks like the boys at Ranch Pit Stop have been doing their engineering homework, as evidenced by Yokomo Supremacy at this race. All six qualified for the A Main! We'll have more on this C4, 4WD rocket later on!



FUTABA'S NEW MAGNUM JR.

OUR "MOLE" has infiltrated the Futaba R&D center and uncovered what seems to be the most electronically advanced radio available to the R/C enthusiast. Here's a first glimpse of it.

GAMBLER



NEW PANDA SERIES RACERS

THE GOOD OL' BOYS at Varicom Industries, who brought us the Mugen Manx and innovative entry-level Panda, have really let it fly this time. Head honcho, Paul Bender, has worked a deal with GM (that's right—General Motors!) to lock up the exclusive on Dale Earnhardt's new, 1/10-scale GM/Mr. Goodwrench Grand National Stocker. The car will be ready-to-run and will feature MOSFET electronics as well as trick suspension.



STOCKER

But there's more! The car will include a radio, and will retail for around \$169! Truly an industry first! Paul is also busy at work building a 1/10-

scale ready-to-run version of Steve Kinser's No. 11 Coors Sprint Car! Can you believe this double whammy?! We'll be featuring both cars shortly, so hold on! These cars will fly under the Team-Panda Banner!

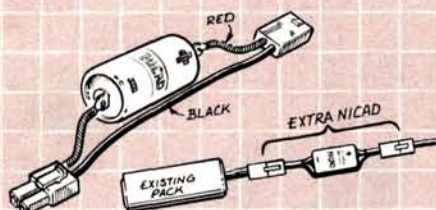


TAMIYA'S NEW SONIC FIGHTER

TAMIYA has just introduced the Sonic Fighter, a new 1/10-scale off-roader car. The Sonic Fighter seems to be an adaptation of the Striker, which had soft suspension. From the illustration, it looks as if they might have made the necessary improvements.

Pit Tips

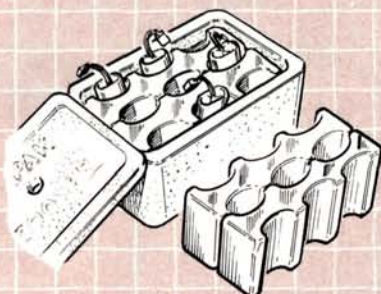
by JIM NEWMAN



PLUG-IN SEVENTH CELL

The Tamiya Fox is set up for 6-cell batteries but, by using a Kyosho/Tamiya male/female connector set, some No. 18 wire and an additional Ni-Cd (wired as shown), this car owner is able to snap apart the existing connector and plug in the extra cell to give a total of 8.4V. The extra cell rides in the hump already provided for those who chose to go with a hump-back 6-cell pack.

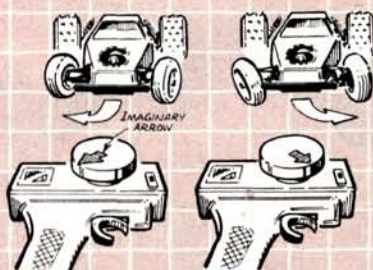
Nick Riale, Wappingers Falls, NY



BATTERY-PACK COOLER

Buy two six-pack coolers (the kind you put in the freezer). Glue them together with CA and place them in an ice chest, making a hole in the foam lid for the wires. Place uncharged Ni-Cd packs in the center row and charged packs in the outer rows. The theory is that cool packs take a better charge.

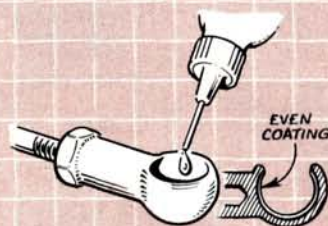
John Stoner, Orlando, FL



ORIENTATION AID

This aid relies heavily on a good imagination, but it might help a beginner, especially a beginner having problems with deciding which way to turn the wheel if the car is heading towards him! Imagine an arrow drawn at the top center of the steering wheel and pointing in the direction in which the car is moving. (To help in this, the radio should be lying flat, parallel to the ground.)

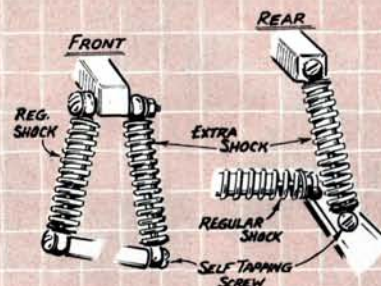
Y.F. Lam, Matawan, NJ



BALL-LINK REJUVENATION

If you find that the ball-links have developed some slack, a good, temporary tightening method is to first pop the ball-link apart and then drop a spot of CA glue into the socket. Rotate the socket so that the inside is evenly coated with glue, then tap the link so that the excess is emptied out. (Wear eye protection for this job.) When the glue has cured, the ball can be snapped back into the socket. If it's still slack, the process can be repeated as often as necessary until the ball-joint is tight.

Ron Tank, Richmond, B.C., Canada



PAIRED SHOCKS

This Blackfoot owner felt that he needed stiffer shocks, especially for handling those big jumps when his machine tended to bottom-out. He noticed that he could attach additional shocks to each corner of the vehicle with no major modifications other than drilling small holes to accept self-tapping screws.

Steve Cybulski, North Kingston, RI



LATCH REPAIR

After prolonged use, the battery-cover latch of this reader's Hornet would pop open at the slightest provocation because the latch had fatigued and bent back through constant use. His cure was to remove the hatch and hold the inside face of the latch over a small flame, gently bending it forward as the plastic softened. When the plastic had cooled, it was back in alignment with the rest of the cover and as good as new.

David Hoover, Uniontown, PA

Radio Control Car Action will give a free one-year subscription (or one-year renewal if you already subscribe) for each idea used in "Pit Tips." Send rough sketch to Jim Newman, c/o Radio Control Car Action, 251 Danbury Rd., Wilton, CT 06897. BE SURE YOUR NAME AND ADDRESS ARE CLEARLY PRINTED ON EACH SKETCH, PHOTO, AND NOTE YOU SUBMIT. Because of the number of ideas we receive, we cannot acknowledge each one, nor can we return unused material.

7roubleshooting

by FRED MURPHY

"Ultima Performance Tips"

THE KYOSHO ULTIMA won the World Championships, and the April issue of *Radio Control Car Action* helped us all to understand what improvements were made on the car to make its success a reality. But what about improvements *you* can make to the stock version of the Ultima to improve its performance without spending an excessive amount of your hard-earned money?

The three main areas where inexpensive performance improvements can be made are in the proper adjustment of shock oil and springs, customizing the stock tires and use of a front stabilizer.

First, look at your shocks. Shock length is a basic, but sometimes overlooked, feature in car construction. When you adjust the shock ends, make sure that the front shocks are both the same length and that both rear shocks match too. This is logical, but I've actually seen many cases of carelessly assembled shocks where one shock is longer than the other. This can adversely affect handling. Make sure that all shocks are the correct length, and future adjustments will be of oil and of spring tension, and not of length.

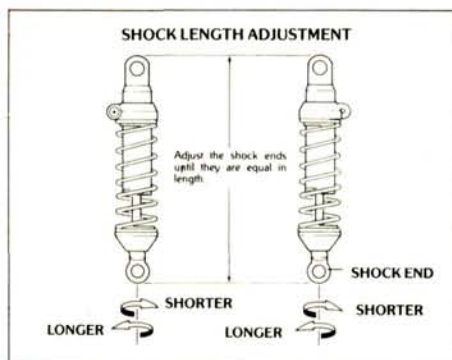
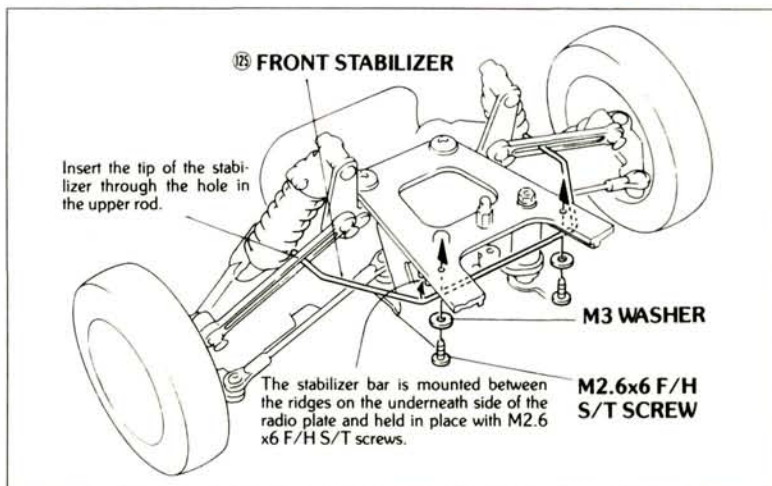
The easiest, most effective way to improve your car's handling is to adjust

the shocks by making changes in the shock oil and spring tension. Follow these basic guidelines for good results: If your car is oversteering, put a heavier oil in the front shocks or increase the tension on the front springs. If the oversteering is really bad, you might need to make both types of adjustments. These changes increase downward pressure on the front tires to give them more traction and decrease the car's steering response. If you have the opposite condition—understeering—you should set the front shocks up with a lighter oil or decrease spring tension. This will decrease front-tire traction and make the steering more sensitive.

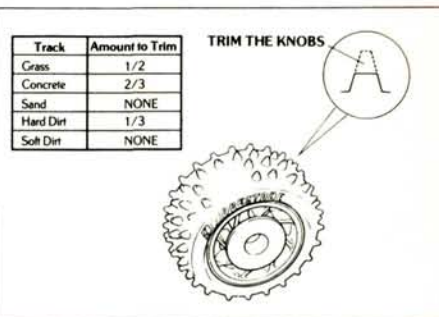
As for the rear shocks, use a heavier oil or increase spring tension to decrease traction and a lighter oil or less spring tension to increase traction.

This may all sound silly to you, but think about it. To increase traction you want as much of the tires' surfaces to be in contact with the track surface as possible. By lightening the shock oil or spring tension, you'll allow the suspension to conform more easily to the surface and not cause the tires to bounce over the track. Remember that these suggestions

are based on off-road conditions. Your *local* track conditions might dictate other settings, but these settings should be helpful in running at most off-road



Adjust the shocks so that both front shocks and both rear shocks are exactly the same length.



You can increase the performance of your Ultima for various track conditions by trimming the knobs of the tires. Consult the chart above.

facilities.

There are ways to customize your stock Ultima tires to make them conform to track conditions. You don't always have to buy a new set of tires. By trimming the knobs or spikes of the tires, you can easily change the wheels' performance.

If the track is of soft dirt or sand, the

(Continued on page 78)

KO EX-7

by CHARLIE KENNEY

THE KO PROPO EX-7 is one of a new series of pistol-grip radios built by the Kondo Kagaku Co., Ltd. of Tokyo, Japan. KO built the K-line series of radios for Kraft Systems some years ago, and has now joined Varicom* to build an exclusive line of car radios.

The pistol-grip transmitter is smaller than some, and Varicom has designed this system for the younger group of R/C car modelers. The EX-7 sells for less than \$70, so it's competitive in the R/C market place.

The set contains an EX-7 transmitter, KR-288 receiver, two 701 servos, battery box with integral switch harness, extra servo horns, frequency flag, instruction manual and servo mounting hardware. The set I reviewed operated on 27.195MHz, channel 5, color code flag green. Never try to interchange 27MHz with a 75MHz system or vice versa, and *never* use 72MHz crystals, as they are for aircraft use only! Let me summarize the features of the KO Propo EX-7:

Transmitter

- Attractive, modern styling.
- Dust-proof adjustment panel.
- Servo reversing (2-channel).
- Electronic throttle trim.
- Mechanical throttle trim (2-position "kick-down").
- Throttle trigger-guard.
- Battery-condition lights.
- Audio frequency function light.
- Wired to accept Ni-Cd conversion.
- Pop-out 27MHz crystals for easy frequency changes.
- Comfortable foam-rubber-lined steering wheel.

Receiver

- All-new, 2-channel design.
- Narrow bandwidth.
- Molded 3-pin connector.
- Highly selective.

Servos

- Long-life motors and pots.
- High torque and speed.

Econo-Racer Radio



- Water resistant.
- Synthetic resin gears.

I always like to start with the transmitter as it's the heart of any radio system. The front panel controls are shown in the accompanying photo. Starting at the center is the steering wheel. The thumb-wheel steering trim control is just above the

wheel, and throttle trim is to the left of the wheel, under the removable cover. Moving to the right, note the battery-condition indicator. Starting at the top: a green indicator which indicates full power. Below: a yellow lamp which indicates low power and shows when batteries should be replaced if you're using alkaline cells, or recharged if you're using Ni-Cds. Below the yellow light is a second red light that indicates the presence of modulation. Below the indicators is the slide action on/off switch (left is "off," right is "on"). Below and to the left is the throttle trigger. It's a dual action control with the trigger moving forward for braking and being squeezed for full speed.

The final series of controls are under an adjustment panel on the top left front of the transmitter. To gain access to the controls, the cover must be removed by sliding it to the right. I'll identify the controls shown in the photo. At the top: the throttle trim control which needs to be adjusted with a small screwdriver. Below the throttle trim are the servo-reversing switches: throttle to the left and steering to the right. The "up" position is normal and "down" is servo reverse.

Rounding the transmitter front is an 8-element 30-inch whip antenna and an externally removable crystal at the top right under a green, plastic cover (green for 27.195MHz). The eight transmitter batteries are located in the transmitter's base



Business side of transmitter. Battery pack at bottom. Extremely clean P/C board.

The following chart shows the available 27MHz frequencies:

Channel	Frequency	Flag Color
1	26.995 MHz	Brown
2	27.045 MHz	Red
3	27.095 MHz	Orange
4	27.145 MHz	Yellow
5	27.195 MHz	Green
6	27.255 MHz	Blue

TRANSMITTER (EX-7)

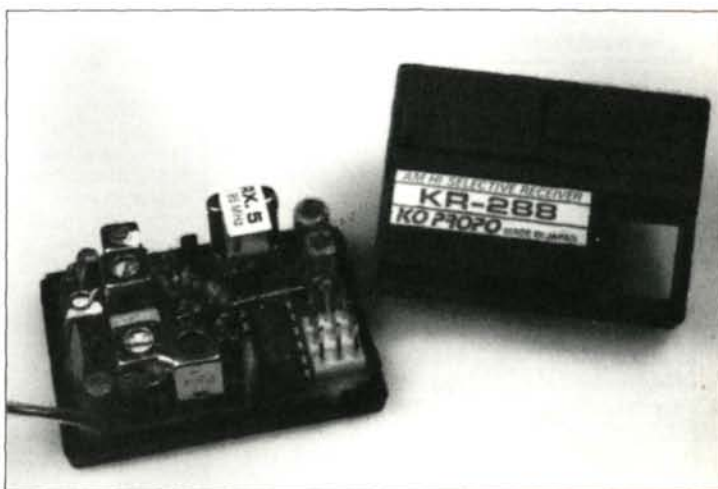
Style: Pistol grip
Available frequencies: 27MHz band
Output power: Max 500mW
Power: 9.6V DC, 8 alkaline or Ni-Cds
Current consumption: 100mA at 9.6V
Pulse width: 1.85 + or - .5ms
Size: 9 $\frac{3}{4}$ H x 7W x 2 $\frac{7}{8}$ D inches
Weight (dry cells): 1 pound

RECEIVER (KR-288)

Type: Single-conversion amplitude modulation (AM)
Sensitivity: -93dbm.
Available frequencies: 27MHz band
Power: 4.8V DC, alkaline batteries
Current consumption: 10mA at 6V
Dimensions: 7 $\frac{1}{8}$ H x 1 $\frac{3}{4}$ W x 1 $\frac{1}{4}$ D inches
Weight: 0.88 ounce

SERVOS (PS-201S)

Travel angle: + or - 45 degrees
Torque: 47 ounces to the inch
Speed: 0.3 seconds/70 degrees
Dimensions: 1 $\frac{1}{2}$ H x 1 $\frac{1}{2}$ D x 0.75W inches
Weight: 2 ounces



Very compact receiver measures 7 $\frac{1}{8}$ x 1 $\frac{3}{4}$ x 1 $\frac{1}{4}$ inches and weighs only 0.88 ounces.

INDY

INDY R/C SALES, INC.
10620 N. College Ave. • Indianapolis, IN 46280
ORDER TOLL FREE! 1-800-338-INDY
Toll Free Line for Orders only. For Info. & Service (317) 846-0766.

ORDERING: \$4.00 handling on all orders. Prepaid domestic order postpaid; foreign orders allow \$15.00. On Airmail parcels, allow additional funds. Orders-check, M.O. or COD - Bank Americard, Visa or Master Charge (bank no.) 5% Indiana Sales Tax. -Limited quantity on some sale items. -Prices subject to change w/o notice.

Rockbuster & Hopped-Up Rockbuster



The assembled Rockbuster from World Engines, 7.2 volt 1/10 scale off-road car is just the ticket for entry level racers. Front wheel independent suspension, batteries and radio are not included. Minimum amount of assembly required.

	Original	Hopped-Up
Unassembled Kit	\$39.95	\$54.95
Assembled	\$49.95	\$64.95
Accessories	List	INDY
Oil Filled Front Shocks	19.99	\$15.99
Ball Bearing Kits 9Lg/1sm	Special	\$18.50

PRO ACE 1010 CHARGER



- Charges 4 cell (4.8V) through 8 cell (9.6V)
 - Adjustable Current - 250 mA to 1800 mA
 - Input Sources - AC Cord/DC Cig lighter plug/DC Power cord
 - Mechanical Timer • Trickle Charge
 - Output-Tamiya Connector 2-way universal jack
 - Discharge / Super Charge Fuse Protected Circuits - AC/DC
- List \$74.95 **INDY SPECIAL - \$44.95**

ROAR APPROVED! GATES BATTERIES

Gates/GEmax "matched cell" battery packs are built with leading edge Sub-C technology.

Camel Back 7.2 V 1400 mA Pack	\$18.95
2 Hump Packs for	\$33.95
or	
Flat 7.2 V 1400 mA Racing Pack	\$21.95
2 Flat Racing Packs for	\$39.00

Bearing Kits for Tamiya/MRC Cars

Frog	8 Lg	\$15.20
Hornet	9 Lg 1 sm	\$18.75
Grasshopper	9 Lg 1 sm	\$18.75
Bruiser	9 Lg 2 sm	\$20.40
The Fox	4 Lg	\$7.50
Road Wizard	5 sm	\$8.25
Boomerang	17 Lg 5 sm	\$40.55
Falcon	11 Lg 1 sm	\$22.55
Big Wig	9 Lg 5 sm	\$25.35
Blackfoot	8 Lg 2 sm	\$18.50
HotShot	17 Lg 5 sm	\$40.55
Toyota Celica	10 sm	\$16.50
Striker	11 Lg 1 sm	\$22.55
Fast Attack Vehicle	10 Lg 2 sm	\$22.30
Lunch Box	9 Lg 1 sm	\$18.75
Newman Porsche	1 sm	\$1.65
Porsche 959	10 sm	\$16.50
Toyota Tom	1 sm	\$1.65
Wild One	10 Lg 2 sm	\$22.30

INDY'S CAR COMBOS



The FOX
plus 302 PX
Pistol Grip Radio
Combo Value 269.25
SPECIAL \$194.00



MONSTER BEETLE
plus Challenger 250
2 ch Dual Stick
Combo Value 238.55
SPECIAL \$164.95



ROAD WIZARD
plus 302 PX
Pistol Grip Radio
Combo Value 221.24
SPECIAL \$159.95



MIDNIGHT PUMPKIN
plus Challenger 250
2 ch Dual Stick
Combo Value 202.90
SPECIAL \$147.95



THUNDERSHOT
plus 302 PX
Pistol Grip Radio
Combo Value 267.90
SPECIAL \$189.98



PORSCHE 959
plus Futaba Magnum
Sport Radio
Combo Value 434.45
SPECIAL \$269.95

★★ TAMIYA ★★



R/C CARS	Retail	INDY
RA 5841 Frog	165.70	\$117.50
RA 5843 Grasshopper	88.00	\$62.95
RA 5845 Hornet	118.40	\$84.95
RA 5848 Bruiser	394.60	\$274.95
RA 5850 Wild One	202.15	\$144.95
RA 5851 The Fox	194.30	\$132.95
RA 5842 Porsche 956	205.20	\$144.95
RA 5849 Toyota Toms	164.40	\$116.95
RA 5852 Newman Porsche	164.40	\$116.95
RA 5854 SuperShot	330.20	\$229.95
RA 5853 Road Wizard	146.29	\$104.95
RA 5855 Boomerang	192.70	\$136.95
RA 5456 The Falcon	140.55	\$99.95
RA 5857 BigWig	320.75	\$224.95
RC 5858 Blackfoot	125.00	\$89.95
RC 5859 Porsche 959	294.50	\$210.00
RA 5860 Monster Beetle	178.60	\$129.95
RB 5861 Striker	116.25	\$92.00
RA 5862 Hot Shot II (4WD)	224.95	\$164.95
RB 5863 Lunch Box	116.75	\$85.00
RA 5864 Toyota Celica Rally	299.95	\$213.95
RA 5865 Clod Buster (4WD)	305.00	\$218.95
RA 5866 Super Sabre	202.95	\$144.95
NEW! RA 5867 Thundershot	189.95	\$134.95
NEW! RA 5868 Lotus Honda 99T	154.95	\$112.95
NEW! RA 5869 Williams Honda F-1	154.95	\$112.95
NEW! RA 5870 Midnight Pumpkin	144.95	\$104.95

KO EX-7



The EX-7 has christmas tree battery monitoring lights instead of meter.

under a removable cover. Ni-Cds can be substituted for alkaline cells, but an appropriate charger with suitable connectors must be obtained. Hobby Shack sells these chargers, and also the wiring harnesses for both receiver and transmitter if Ni-Cds are desired. In addition, various servo cable straight and Y extensions are available.



The EX-7's tuning panel is kept clean under smoke-tinted cover.

On the transmitter there's a charging jack for charging Ni-Cds, and there's also a throttle position control which changes the trigger control neutral. The "A" position gives about equal throw for forward and reverse control. The "B" position provides greater throttle movement and less reverse. This control is positioned by the driver.

In summary, the KO Propo EX-7 is a very well made, uniquely styled, 2-channel system. The KR-288 receiver is tiny by comparison and, with two servos, receiver and battery pack make a radio installation weighing only 10 ounces. If you're in the market for a car radio, take a good look at the KO/Varicom collection of new, high-quality radios and, in particular, consider the EX-7 as the price is right.

Tell Varicom that you read about their radio in *R/C Car Action*.

*Here is the address of the distributor featured in this article:

Varicom, 18480 Bandilier Circle, Fountain Valley, CA 92728.

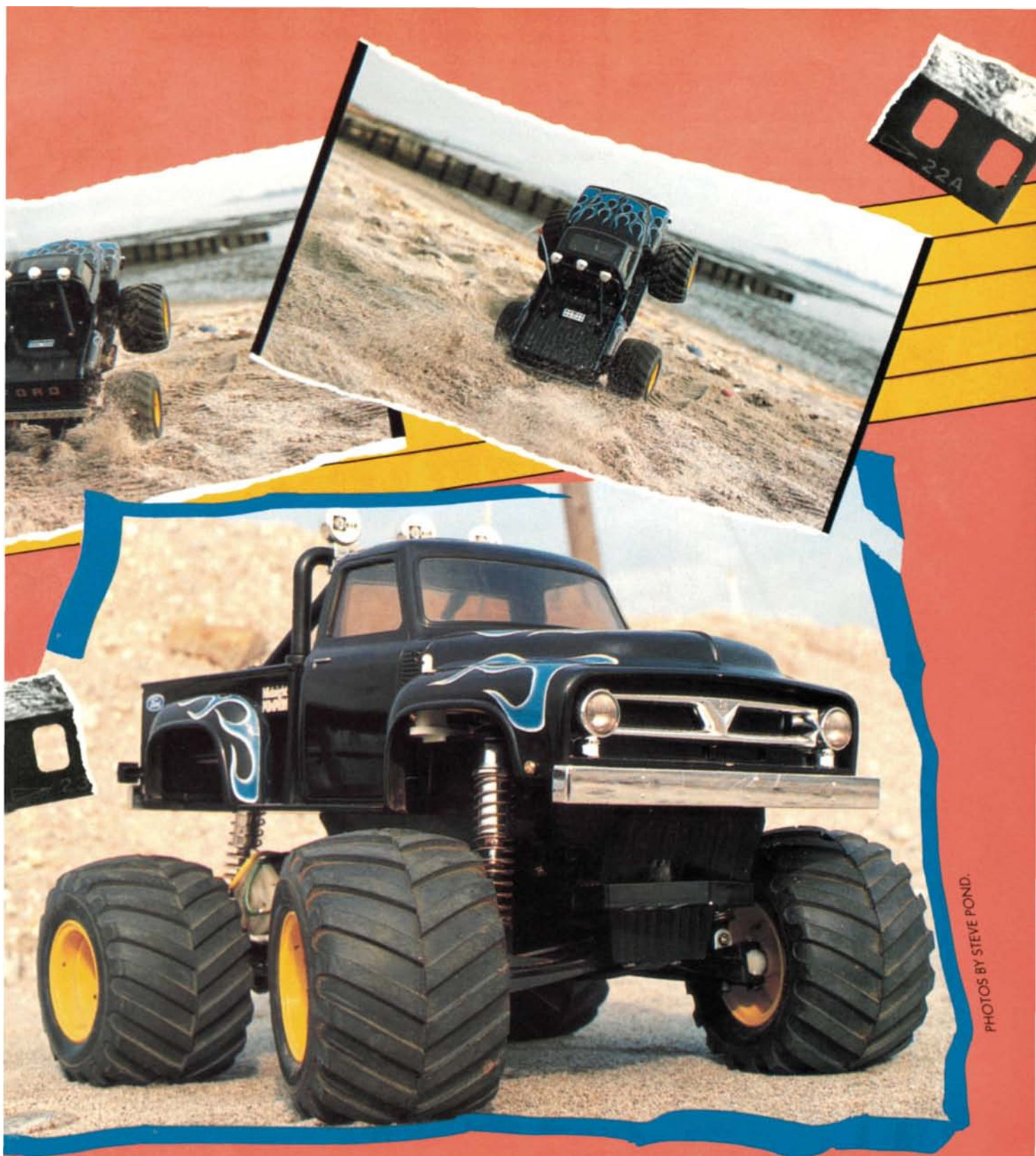
Track Report

MRC/
TAMIYA

by STEVE POND

**CINDERELLA GETS
REVENGE
AND SQUASHES
HER UGLY
STEPSISTERS!**





PHOTOS BY STEVE POND.

THE FEBRUARY 1988 issue of *Radio Control Car Action* featured a track report on the Lunch Box $\frac{1}{12}$ -scale monster van by yours truly. I pointed out that Tamiya* had gone against the flow with this new mini-monster by making it just about the smallest in its class.

The new Midnight Pumpkin is the latest monster truck from Tamiya. It's about the same size as the Lunch Box and features the same chassis.

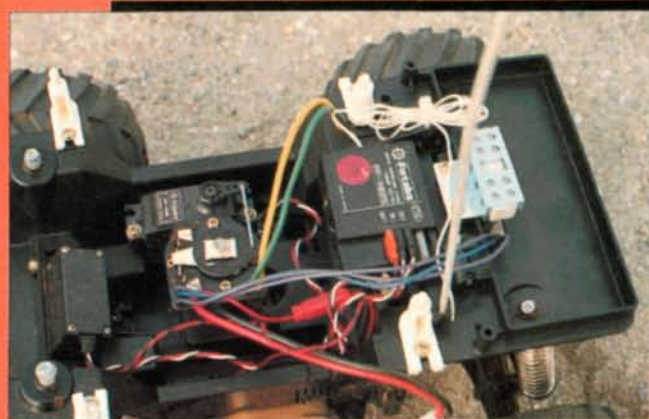
The chassis is of the bathtub variety and is molded from ABS plastic, as are most of the other parts in the kit. Those of you who are familiar with the Tamiya line of



Top left: The gears used in the Pumpkin differential are similar to those used in the Hornet and many other Tamiya kits.

Above left: Another similarity between the Hornet and the Pumpkin is the front suspension arms.

Right: This view from above shows how organized the guts of the Pumpkin are after radio installation.

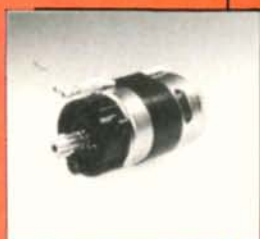


cars will recognize the suspension as being that of the $\frac{1}{10}$ -scale Hornet. The front suspension features the same (and somewhat outdated) independent A-arms. These A-arms are not paired with any upper A-arms or even control arms, so any movement in the suspension will cause radical changes in the camber angle of the front wheels, as well as a change in the alignment. The rear suspension, as mentioned before, is the same as the Hornet's and has a rigid axle that is less than adequate to

keep the tires on the ground.

The suspension isn't quite up to par when it comes to ground-holding ability but, as any Hornet owner will tell you, it's as tough as they come! This is the redeeming quality of this design. Because the Pumpkin is a monster truck, its handling ability isn't as important as its ability to take a beating—and a beating it will get! Now that you know the little defects of the Midnight Pumpkin, I'll tell you how it goes together.

CONSTRUCTION: Assembling the Pumpkin is very easy. As most Tamiya veterans will tell you, Tamiya includes the most detailed instruction manual in the business. So, if you have a problem with



Far left: To obtain the proper gearing to compensate for the larger tires, a spacer is used to offset the motor and allow the use of an 11-tooth pinion.

Left: This view shows the business end of the Pumpkin ready for installation.

The Pole Position

by RICH HEMSTREET

On-road $1/10$ -scale racing is, without a doubt, on the increase.



Recent Trends of Radio-Controlled Racing.

WHERE'S RADIO-control racing going? It seems that the popularity of almost every aspect is increasing. Quarter-scale oval-track racing shows lots of potential. New, permanent tracks are being built or planned all across the country. Some of these tracks will also have $1/8$ -scale gas and $1/10$ -scale electric car races on them. There's been very little thought given to running $1/4$ -scale cars on road courses. I hope that plans for road courses will remain alive, even if on the back burner. Even NASCAR has cut back from three Winston Cup road-course races in '88 to two.

As 1987's Radio Control Car Action Weekend demonstrated, $1/10$ -scale on-road racing has an exciting future. Although this racing is especially thrilling when the cars race on high-banked ovals,

these cars also race well on parking lots. More manufacturers are making plans to become involved. Watch for some hot, new motors at R/C events this year. High-speed oval racing can really use horsepower, and aerodynamics will also play a larger part.

Off-road $1/10$ -scale racing continues to be popular, but most of the excitement came last year, with Kyosho* and Schumacher earning IFMAR world titles. There probably won't be as much activity as that until the '89 World Championships.

There's a lot more interest in $1/10$ -scale

dirt oval racing. With Custom Works* Dominator setting the pace, many manufacturers are making conversion kits for the most popular off-road cars. This type of competition improves everyone's equipment. Dirt-oval cars are usually more complex than their on-road counterparts, but the same horsepower and aerodynamic aspects come into play.

For the most part, $1/12$ -scale racing is moving inside, onto carpeted tracks. While the $1/12$ -scale class is growing, it doesn't seem to be as popular as $1/10$ -scale. These $1/12$ -scale cars are really best suited

The Machesney Park Raceway even has a drag strip for $1/10$ -scale to $1/4$ -scale cars.





Quarter-scale supermodels are racing at the new Machesney Park Raceway.

to racing indoors. Unfortunately, there are very few permanent indoor tracks large enough for really good racing. It's difficult to promote a sport at temporary track sites, and $1/12$ -scale needs better promotion.

What about $1/8$ -scale racing? There seems to have been the least growth in this area. Most $1/8$ -scale off-road cars use stock car bodies for racing on dirt ovals. I haven't heard of any off-road events in the U.S. for this scale. On-road $1/8$ -scale cars are still running Can-Am bodies on road courses and are creating the same amount of excitement as full-scale Can-Am—very little! Until promoters insist on racers using Indy, GTP or stock car bodies, $1/8$ -scale will not capture the attention of many R/C enthusiasts.

Front-engined, $1/8$ -scale, sprint cars continue to increase in popularity in the Midwest. These cars have been usually run on dirt ovals but are now run on paved ovals also. These $1/8$ -scale cars are some of the best examples of true-to-scale racing.

Drag racing in all scales is still in the staging area. No strong national direction or leadership has emerged. Some tracks have been built with strong local support, but little has happened nationally. Perhaps, this summer, R/C drag racing will take off without red lighting.

High Speeds

Last month I explained how to figure out the actual speeds of R/C cars. But how many of you have heard about the $1/12$ -scale electric car that can go 360mph, or the $1/8$ -scale RC-500 that reaches 480mph? These are examples of scale-speed myths. For years, some individuals (mostly race announcers or advertisers) have rattled off these kinds of figures to impress people. Radio-control car racers don't need to lie in order to impress people.

These "scale" speeds are arrived at by multiplying the actual speed by the inverse of the scale of the car. A $1/12$ -scale car that goes 30mph is said to be doing the equivalent of a full-scale 360mph ($30 \times 12 = 360$). But a $1/10$ -scale car, traveling at a "scale" 350mph, would blow by the $1/12$ -scale "360mph" racer, because the $1/10$ -scale car would actually be traveling 35mph. While the cars we race are scaled

down, the relationship between time and distance is a constant one. Let's be accurate in our statements about the speeds of R/C racers.

Four Tracks

Machesney Park Raceway of Rockford, IL, is a new, Midwestern facility with four tracks. There's a large, low-banked, asphalt oval, primarily for $1/4$ -scale racing. Both $1/8$ - and $1/10$ -scale on-road cars will occasionally race on the big oval. A clay oval is available for $1/8$ - and $1/10$ -scale off-road cars. Indoors, there's a flat asphalt oval for $1/12$ -scale and $1/10$ -scale winter racing. Finally, outside, a new dragstrip



In spite of new diversity, off-road electrics remain popular.

Left: Front-engined Sprint cars are spreading from the Midwest.

with a "Christmas tree" will handle everything from $1/10$ -scale to $1/4$ -scale dragsters. I've been told that this is the best $1/4$ -scale track in the country.

Next month, I'll discuss GTP, GTO racing. A new McAllister $1/10$ -scale GTP Jaguar body should be out shortly. Until next time, keep it shiny-side up!

*Here are the addresses of the companies mentioned in this article:

Kyosho, Box 4021, Champaign, IL 61820.

Custom Works R/C Products, 13631 Navajo Rd., Apple Valley, CA 92308. ■

Home-Grown Project

WHY, "RUG RAT"? Well, it runs on a carpet and, as any hot-rodder worth his camshaft will tell you, a "rat" is a big-block Chevy engine. Rug Rat's appearance is deceptive; it's not a super-gas-class drag car or a pro-street machine. In fact, it's rather slow! This car was actually built for sled-pulling—an event where monster trucks and souped-up tractors are more common. Designed to run at a local "outlaw" track where there are no rules and only two divisions (2WD and 4WD), the Rug Rat has some atypical features.

Underneath the wild paint job is a super-strong chassis of birch plywood with spruce and aluminum structural members. The central bay houses the motor and drive line, and the side bays hold lead weights and drive batteries. Up front, a set of chrome wheels and Baja-Buggy tires are attached to Tamiya* 1/12-scale steering and front-end components. Out back, monster AJ* sponge slicks are mounted to a set of Associated* 1/8-scale wheels. There's no suspension, as it isn't needed for sled-pulling. A Futaba* radio handles the control functions, and the receiver battery pack is mounted all the way up front.

The heart of the Rug Rat is a relatively large Marx Hectaperm GT 500 motor, which is about the size of a large can—a soda can, that is! A 6mm armature shaft spins up to 32,000rpm on 30V, thanks to the 17 cobalt-samarium magnets and a set of heavy-duty ball bearings. A built-in turbine fan cools the brushes during operation, and speed is regulated with a Marui speed control.

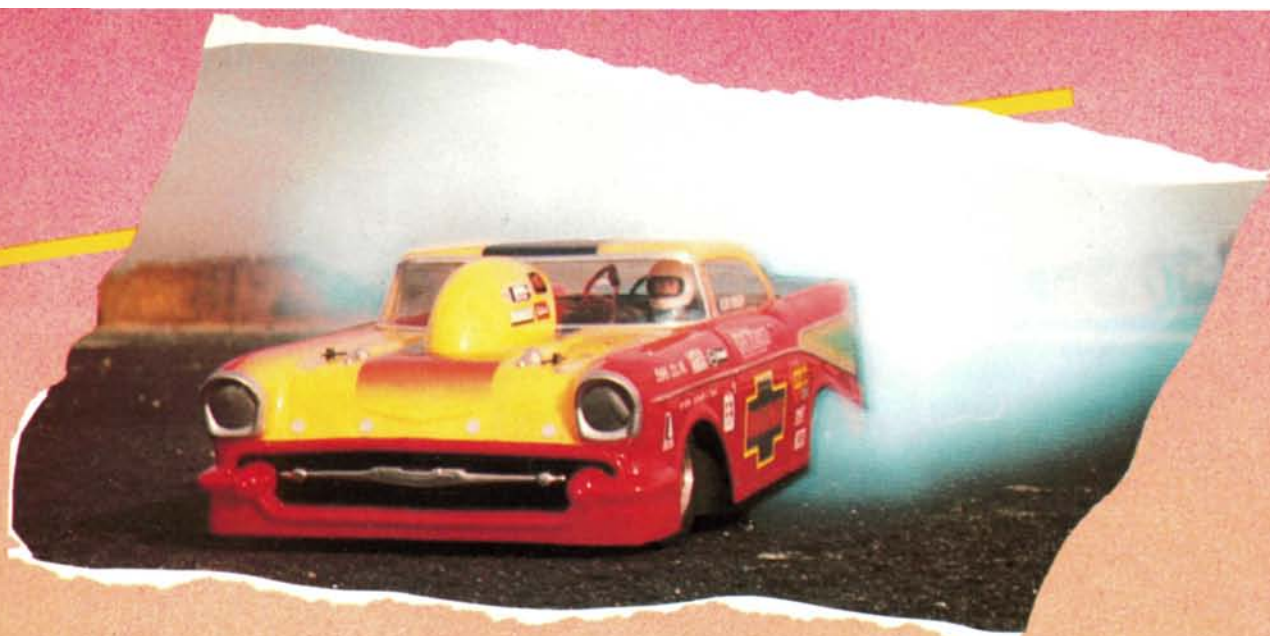
Bolted to the rear of the motor is a planetary gear transmission, which has a selection of ratios ranging from 3-to-1 to 360-to-1. A universal joint connects the transmission output shaft to the rear-end gears. (I borrowed the



THE

RUG RAT

**AN OUTLAW
THAT CAN**



gears from a right-angle drill drive attachment.)

The pinion shaft and rear axle are of custom-made 1/4-inch-diameter stainless steel, and they spin in 1/2-inch-o.d. precision ball bearings. The usual gear selected for most pulls is a 24-1 ratio,

and the rear axle ratio is 2.2-to-1. Using only a 6-cell pack, this is enough to pull a fully loaded sled (around 100 pounds) or a kid's wagon with a toddler on board. Increasing the gear ratio and adding some lead ballast theoretically makes the Rug Rat capable of pulling a Volkswagen Beetle!

The Parma* '57 Chevy body was painted and detailed to resemble the current crop of super-gas-

(Continued on page 111)



by ERIC GOLDSCHRAFE



**ARPET SLED-PULLER
HAUL 100-PLUS POUNDS.**



Applying Striping Tape

by RICH HEMSTREET

THE FASTEST WAY to get your car on the track is to use a pre-painted body. The second-fastest way is to paint a single color onto a clear body. The problem with either approach is that both result in a very mundane-looking car body. Now Autographics* offers a variety of stripe kits so that you can *quickly* dress up a plain car.

All of these stripe-kit decals use the peel-and-stick method of application. Positioning stripes is often a problem, and you may have to pull a decal off so that you can realign it. If you remove a stripe too many times before you get it right, it may no longer stick, or it could tear or wrinkle. Fortunately, Autographics offers a simple solution. After peeling the decal off the backing sheet, slip it into a bowl of water

containing a little mild dishwashing detergent, and then let the decal sit for a few seconds. Wet the area on the car body where the decal will be applied, and then pull the decal out of the water and slide it into place. The soapy water permits you to slide the decal on the Lexan until it's in the desired position. When the stripe is where you want it, dry it with a lint-free rag.

When using the Trim-Lines or Side-Lines stripe kits, it's important to trim the decals so that you don't have a clear-film lip sticking out from the colored portion. It may not be noticed from a distance, but it does look sloppy close up. Take the time to use a straightedge and a sharp hobby knife to cut the decals from the backing material.

Autographics encloses an advice sheet with their new stripe kits, and this gives creative advice on how to get the best results. After reading their tips, I'm sure you'll get your own ideas.

If you're into show cars, you may use more sheets than cars, but I prefer to apply only a few stripes to each car body. Racing cars usually have simple paint schemes which are uncluttered and carry only their sponsors' decals. If you keep your designs simple, each stripe-kit sheet will usually be enough for two or more cars. In any case, if you're in a hurry but don't want a plain-Jane car, try a stripe kit from Autographics.

**Here is the address of the manufacturer featured in this article:*

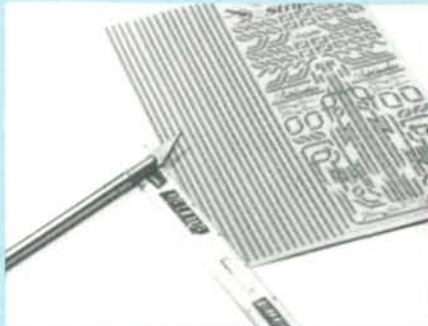
Autographics, 1700 14th St., Bakersfield, CA 93301.



For a wide variety of time-saving striping decals, check your local hobby shop for the Auto Graphics line.



Only a few stripes can make all the difference on your R/C car.



Trim close to the stripes with a hobby knife and straightedge prior to applying them, to make the job as clean as possible.

Track Report



Kyosho

RAIDER

by STEVE POND

A LOW-COST 1/10-SCALE OFF-ROADER
WITH THE BASIC INGREDIENTS
TO BE A
COMPETITIVE
MACHINE.



PHOTOS BY STEVE POND

SINCE THE INCEPTION of *Radio Control Car Action*, I've seen many R/C cars whose manufacturers claimed the "best" entry-level car. At supported some of these claims, because some cars were the best available at that time.

The introduction of the Kyosho* Raider has changed the way in which I assess an entry-level car.

The Raider is neither made of some new, space-age material that

reduces

the car's

weight by half, nor

does it have a

revolutionary design that will

make all other cars obsolete. In fact, there's little about the Raider to make

it much faster than other comparable entry-level cars. "So, what," you say, "makes the

Raider unique?" Read on!

THE KIT: The Raider features a bathtub-type chassis, independent semi-trailing-arm front suspension with upper control arms, independent A-arm rear suspension with upper control arms, a sealed gear-case with a

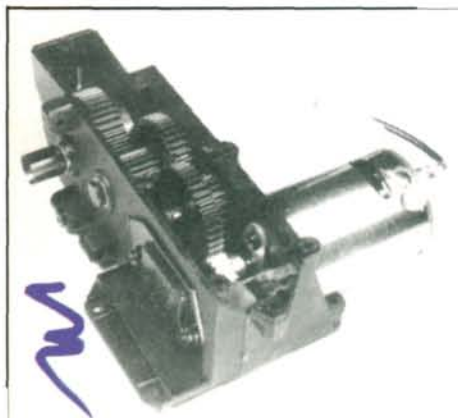
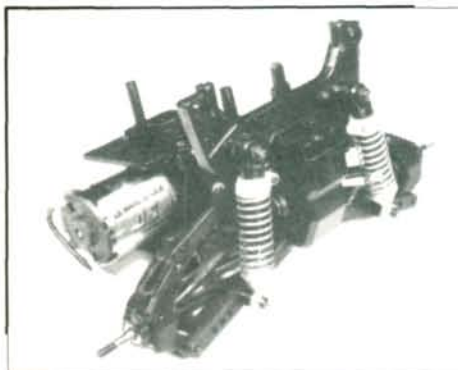


In stock form, the new Kyosho Raider is worthy competition for any car in its price range, but the versatile design shows more potential for modified racing than any other comparable kit.



Below: The assembled view of the Raider rear end reveals the high-performance LeMans 05 stock motor. A look to the top of the shock mounts reveals mounting locations for oil-filled shocks.

Bottom: The gearbox on the Raider features strong, glass-filled nylon gears.



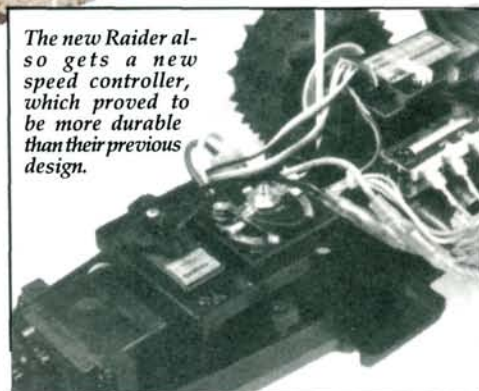
planetary gear differential, mid-mounted LeMans Stock 05 motor, a new, three-step forward-and-reverse speed control, friction-dampened shocks, bronze bushings supporting precision-molded nylon gears and, finally, a Lexan body.

You may recognize the Raider's suspension geometry as being similar to that of the RC 10. This independent suspension is one of the features that distinguishes the Raider from some of the pack, but it isn't what makes it an exceptional car.

The differential housing and suspension arms are molded of glass-filled nylon, while the chassis is molded of ABS plastic. This combination ensures a low overall weight with good strength, but this isn't the reason for its excellence either.

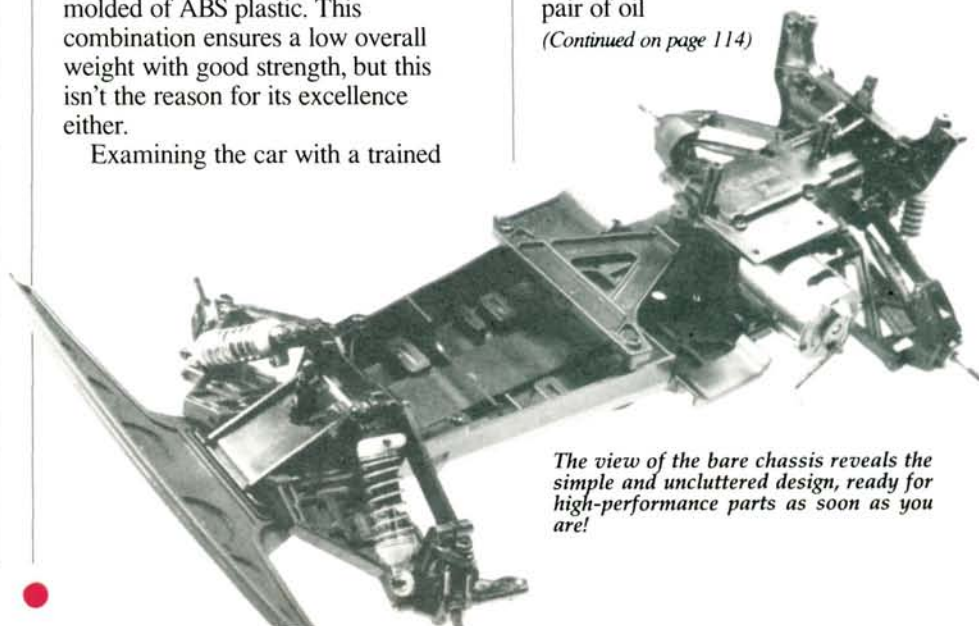
Examining the car with a trained

The new Raider also gets a new speed controller, which proved to be more durable than their previous design.



eye, you'll notice that the rear suspension arms and the rear body mount will allow you to bolt on a pair of the Kyosho Option House oil-filled shocks. The front suspension also has mounts in the center of the A-arm (similar to the RC 10 mounting location) for a pair of oil

(Continued on page 114)



The view of the bare chassis reveals the simple and uncluttered design, ready for high-performance parts as soon as you are!

U S I N G

PARMA UNIVERSAL BODY MOUNTS

by T. J. LYN

AN EASY WAY TO GET IT COVERED



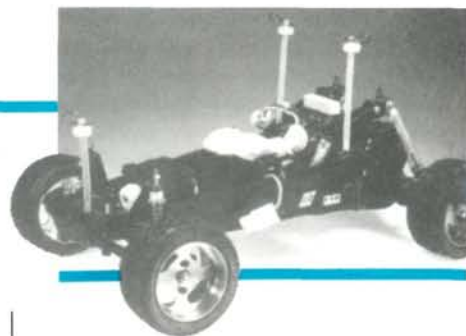
With the use of the Parma Universal Body Mounting Kit, a hot-rod body, and a set of these Advance Engineering tires and wheels, you can transform your off-road car into a sparklin' hot rod!

WITH HUNDREDS OF after-market Lexan bodies now available, many *Radio Control Car Action* readers have asked about an easy way to mount one of these bodies, because they want to give their cars a new image. One frequently used mounting system is Universal Body Mounts from Parma International*.

Part No. 10450 is a mounting kit that's designed for mounting all types of bodies on your Grasshopper and Hornet. Monster truck, off-road buggy and oval-track racing bodies are all possible, and you could even mount different bodies on the RC 10. This mounting system is truly universal.

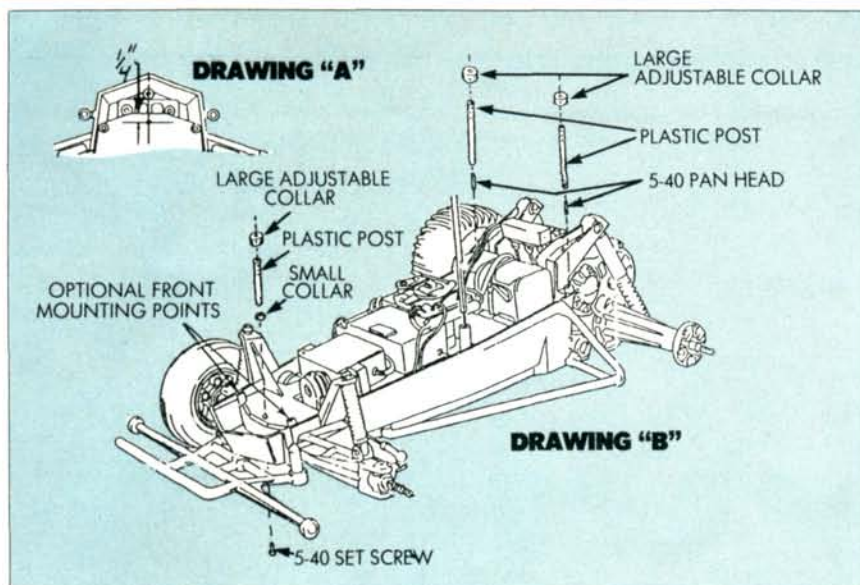
Parma's Body Mounts kit includes all you'll need to set up your car with the hottest look. There are four mounting posts, adjustable mounting collars, body clips and enough hardware to mount a body using either three posts or four posts. A complete set of clear mounting instructions is included.

The first step in using any mounting system is to determine whether you'll need four or three mounting posts. To do this, position your chosen body over the chassis before it has been painted, and mark the body at the points where the posts will come through. Before you drill the 1/4-inch holes in the body, install the mounts just in case the body has to be repositioned. When using the Parma system on a Grasshopper or Hornet, you



won't have to make any alterations to the chassis. The Universal Mounts are designed to use the existing holes in the chassis. Whether using a 4- or 3-post system, the Grasshopper or Hornet can be very quickly prepared for a new body.

In both rear corners of the Grasshopper/Hornet chassis are small holes for the rear mounting posts. First, take the self-tapping screw that came with your car kit and thread it into these holes to open them up a little. This makes it easier for



the slotted 5-40 setscrews to go in. To ensure easy threading, put a drop of oil on the rim of each hole. Once the rear setscrews are in place, simply thread a mounting post onto each screw and move to the front of the car to position the front mounts.

If you're only using one mount in the front of your car, the mounting post will be installed in place of your existing front mount (if you have a Hornet) or 1/4 inch from the front of the chassis, where the hole is (if you have a Grasshopper). If you plan to use a 4-post mounting system, the front body mounts should be installed in the two holes at the front corners of the chassis. Once again, you'll have to take a self-tapping screw from the components that came with your kit, and open these holes to allow easy installation of the slotted 5-40 setscrews. When all the mounting posts are in place, make the final adjustments to the body before completing the body installation.

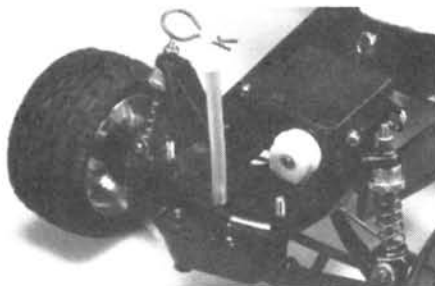
Put the body back onto the chassis, letting it rest on top of the mounting posts. Now re-mark the body if you need to, to



After placing a drop of oil in the body-mounting tube, it is threaded onto the 5-40 setscrew.

show where the holes for the posts should be drilled. Drill 1/4-inch holes at the points you have marked. Put the large adjustment collars on each of the mounting posts, and gently tighten the setscrews. Position the body on the mounts, adjusting the body's ride-height by sliding the adjustment collars up or down as necessary. If the mounting posts are too long and have to be shortened, make sure that you cut the posts on the end opposite the three body-clip holes. If you inadvertently cut off the ends with the holes, you'll have to do some re-drilling!

Universal's body-mounting kits are a



After adjusting the height of the plastic collar that the body rests on and trimming the excess off the mounting tube, you're ready to mount your favorite hot-rod body!

must for those who want to transform their R/C cars into multi-purpose vehicles. A simple change of bodies and tires can give your car a whole new look and function. No need to spend big money on a kit to obtain a new look.

**Here is the address of the manufacturer featured in this article:*

Parma International Inc., 13927 Progress Pkwy., North Royalton, OH 44133.

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AIRBRUSH

(Continued from page 17)

rag, while also pressing down the previously applied tape. Take special care with curves, body lines, and where tape crosses. Hold the tape down with your fingernail or a screwdriver.

Before spraying, study the pictures and design to see in what order tape will have to be removed. Some designs can be confusing, so numbering the tapes can be quite helpful. While spraying, don't load areas where tape has been applied with too much paint, as this can cause lifting or bleeding. After carefully applying several coats of the first color, the tape covering the area for the second color has to be removed. Using a fresh X-Acto blade to lift the edges, pull the tape back toward itself.

Once the tape has been removed, inspect the area for the next color, looking for patches where the tape might have lifted and caused the color to bleed. Use a screwdriver covered by an alcohol-soaked rag to remove paint in these areas. Complete the painting of the remaining colors, using the same procedures and leaving windows, lights and grill work until last.

After allowing sufficient drying time, remove the remaining tape except for that around the windows. Using black, carefully spray around the outline of these areas. This will create a look of depth. Using red, complete the tail lights and then use silver for the front. For the windows, use black (sprayed from a distance of about ten inches) to make them look as if they're tinted.

With only the graphics left to apply, clean the outside of the body with rubbing alcohol. This will remove any overspray and leave a clean surface for graphics to adhere to. Return to your photographs to study the position of the stickers. By using Autographics and Parma stickers, you'll produce a very good copy of your favorite, tire-melting, record-breaker.

**Here are the addresses of the companies mentioned in this article:*

Parma International Inc., 13927 Progress Pkwy., North Royalton, OH 44133.

McAllister Racing, 4545 Industrial St., Unit 5H, Simi Valley, CA 93063.

BoLink R/C Cars Inc., 420 Hosea Rd., Lawrenceville, GA 30245.

Autographics of California, 1700 14th St., Bakersfield, CA 93301.

Coverite, 420 Babylon Rd., Horsham, PA 19044. ■

BUDGET BLACKFOOT



by DICK BRINTON

A FEW DAYS AGO Chris Chianelli, the Executive Editor of *Radio Control Car Action*, phoned to ask me a question:

"Do you know what a Blackfoot is?"

"Sure. A member of the Blackfoot Indian tribe who used to inhabit Montana," I replied.

"No," he said (his voice rising), "the monster truck!"

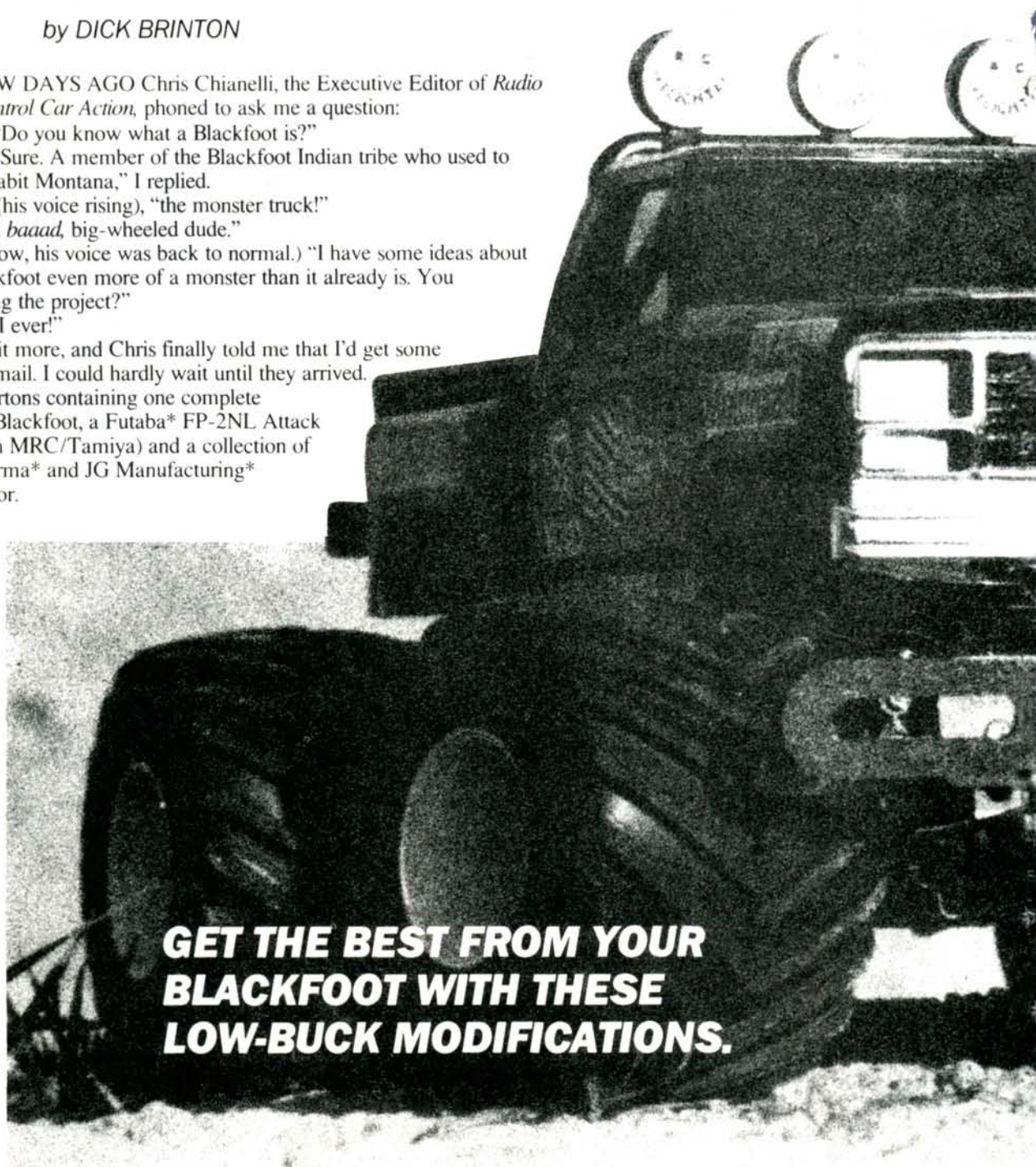
"Oh yeah, that *baaad*, big-wheeled dude."

"Right." (By now, his voice was back to normal.) "I have some ideas about making the Blackfoot even more of a monster than it already is. You interested in doing the project?"

"Oh boy! Am I ever!"

We talked a bit more, and Chris finally told me that I'd get some packages in the mail. I could hardly wait until they arrived.

Eventually, cartons containing one complete MRC/Tamiya* Blackfoot, a Futaba* FP-2NL Attack Radio (both from MRC/Tamiya) and a collection of goodies from Parma* and JG Manufacturing* arrived at my door.



**GET THE BEST FROM YOUR
BLACKFOOT WITH THESE
LOW-BUCK MODIFICATIONS.**



For a nominal cost, you can give your Blackfoot the performance it needs to get to the head of the pack.

Radio Control Car Action tested the Blackfoot for the February 1987 issue and, ever since I saw the truck, I've wanted to get my hands on it to see if it's as nasty as it looks. Now, here it was, sitting on my workbench and ready to go out and sling mile-high dirt.

But before we go boony-bashin', let's do a few low-buck modifications. ASSEMBLY: The first items I laid my hands on were a set of truly spectacular tires and wheels made for the Big Bear. Talk about traction!—if I could get them to fit! This turned out to be easy. I just used the rear hub adaptors (part No. 5008) and the long front-axle stubs (part No. 5009) made by JG Manufacturing. I was on the way to building the car-

crusher to end all car-crushers!

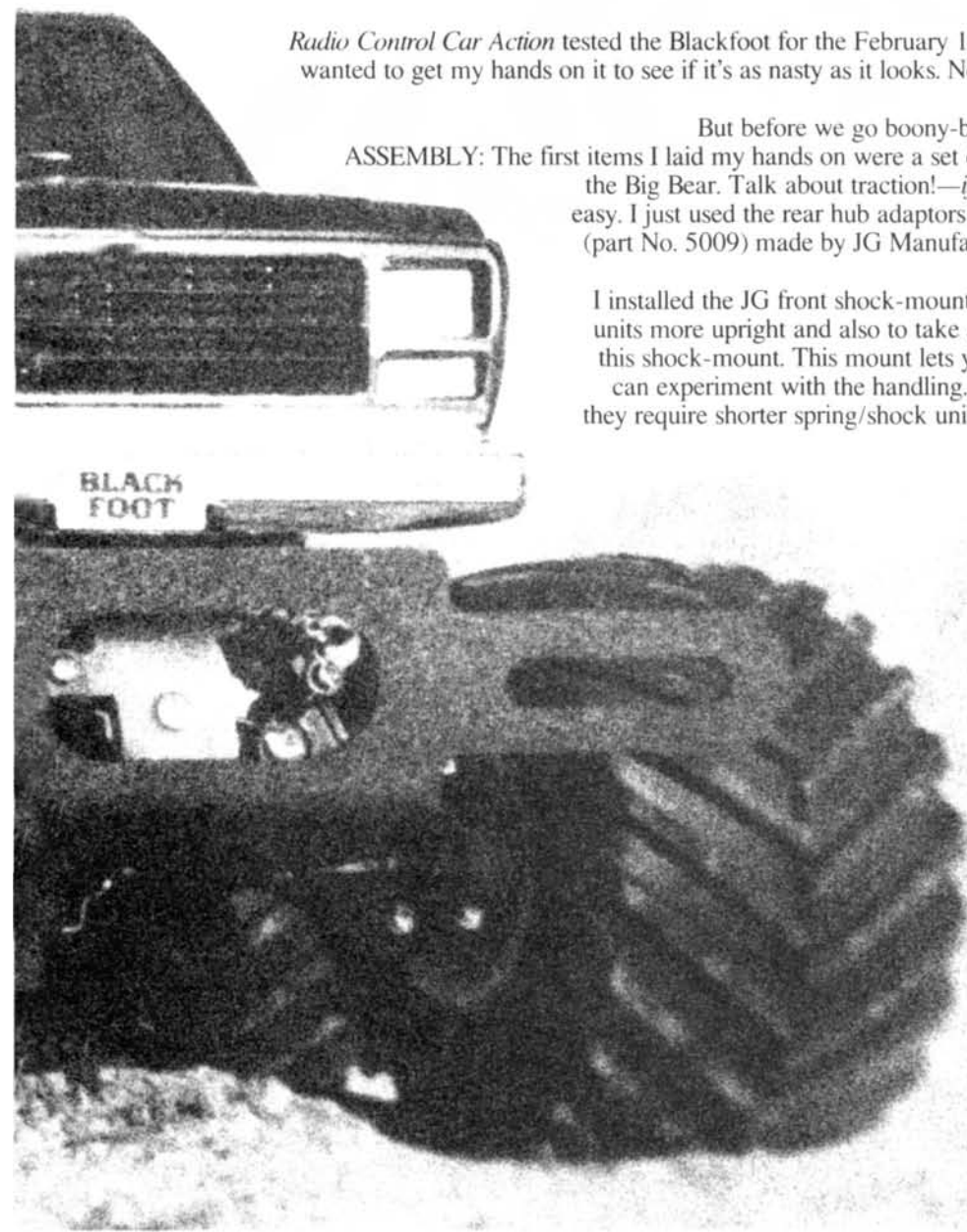
I installed the JG front shock-mount (part No. 5003) to set the front spring/shock units more upright and also to take advantage of the multiple adjustment holes in this shock-mount. This mount lets you use various spring/shock units so that you can experiment with the handling. JG also has rear shock-mounts available, but they require shorter spring/shock units than stock, and that would take this project out of the low-bucks class.

While I was at it, I installed JG's extra-large front bumper and skid plate (part No. 5001), because I just knew this truck was going to end up on its nose at least once in its lifetime.

Now it was time to "Parmatize" the motor and speed controller. The Blackfoot comes with a good, three-speed controller but I felt that the car would work better in the bad stuff with a more gradual control, so I went Parma's Assembled-Resistor Speed Control (part No. 11518).

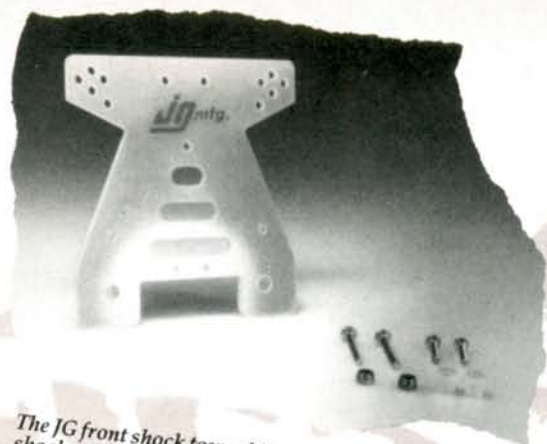
This speed controller has all the soldering completed, so all you have to do is mount it, attach the wiper arm to your servo and adjust it for correct operation. It has a reverse switch that must be carefully adjusted, so be sure to follow the directions!

To keep the motor cool when making the dirt fly, I installed Parma's Wrap-Around Heat-Sink (part No. 11026) and Parma's Cool-Filter Dust Cover (part No. 11011) to keep the dirt out of the motor.





Big Bear tires, having a softer tire compound, are used on the Blackfoot for better traction.



The JG front shock tower kit, along with the rear upright shock mount (not shown), offers many different mounting positions for the stock shocks and also allows you to use Associated or Kyosho oil-filled shocks.

As I mentioned, the radio provided was a Futaba and that sure pleased me. I've used Futaba radios in cars, boats and airplanes for over ten years, and they've never let me down. I install them properly, maintain them carefully, check my battery packs regularly and have the radios serviced. Except for crash damage, I've never had a Futaba radio failure.

Since the people at MRC/Tamiya had already painted the Ford truck body maroon, the only task left was to stick on the decals.

PERFORMANCE: I tried the truck out in the back yard, recharged the battery and headed for the test track.

If Blackfoot tires throw lots of dirt, will Big Bear tires throw even more? You bet! The stock Mabuchi* RS-540S spins them with ease, but the biggest surprise was the way this monster handled.

To look at it sitting up high above the rest of the traffic at the track, you'd think the slightest side-wind would cause a rollover—no way! This baby hung in



The Parma Assembled Resistor Speed Control allows for much smoother and reliable operation.

there and handled the jumps and bumps with the best of them. When you push the throttle to max, it scoots! Just to see if my hunch was right, I tried it out on a concrete slab. I got it movin' right along and ordered up a full left turn, power on. It snapped around in a slide and rocketed off in the new direction, showing no sign of tipping over.

This Blackfoot with the Big-Bear stance is rock-solid in the dirt or on the pavement, and the mods are easy and low-buck. Try my combination, or work out your own. I know you'll be happy with the results.

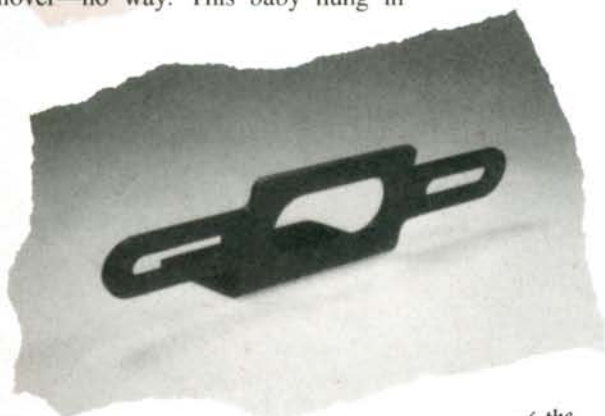
**Here are the addresses of the companies mentioned in this article:*

MRC/Tamiya, 2500 Woodbridge Ave., Edison, NJ 08817.

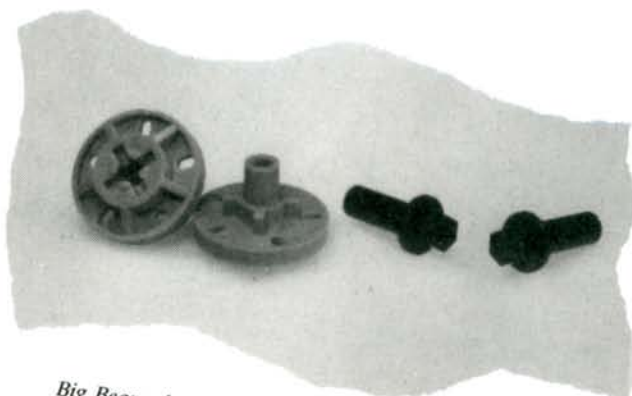
Futaba Corporation of America, 555 W. Victoria St., Compton, CA 90220.

Parma International Inc., 13927 Progress Pkwy., North Royalton, OH 44133.

JG Manufacturing, P.O. Box 6014, Whittier, CA 90609. ■



A stronger JG front bumper is used in place of the original equipment to protect the front end.



Big Bear wheel adapters from JG allow the Big Bear wheels to attach to the Blackfoot.

Track Report OPERATION S L Y

by PHIL SROKA

FOX



SURPRISE... WITH A FEW TRICKS, YOUR FOX
CAN BE WAY AHEAD OF THE HOUNDS!

RACING! THE WORD alone evokes something in all of us. We experiment and squeeze more and more performance from the cars we drive, and many improvements result. The more cars are pushed to their limits, the more knowledge can be gained by manufacturers, who can then go on to produce low-maintenance, high-performance cars for the public.

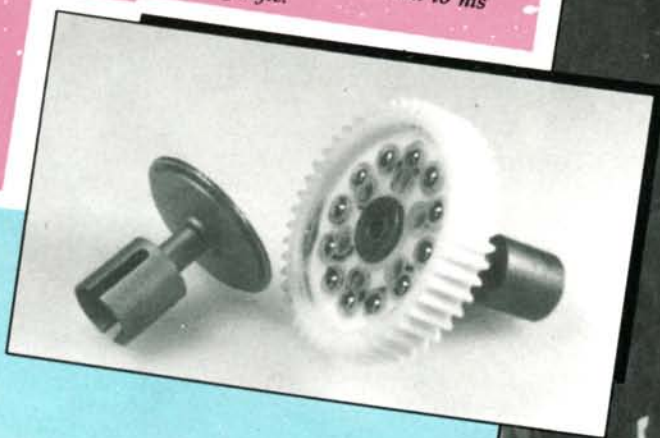
Racing R/C cars is nothing less than testing scaled-down versions of the full-scale cars they represent. Just as with their full-size counterparts, racing will reveal the weak points which need improvements if a car is to be a winner. Many manufacturers produce after-market parts for R/C cars. However, my experience with the MRC/Tamiya* Fox shows that some of these products can actually *decrease* the performance of the

car.

The goal of every racer is to produce a reliable machine that handles well and has maximum power. This might sound simple, but it actually requires extensive experimentation and patience. To save you time and

PHOTOS BY MIKE LEE

Thorp's adjustable ball differential is nearly bulletproof and allows the racer to adapt the Fox to his driving style.



The RM-7 electronic speed controller combined with the EX-9 radio system (not shown) makes one of the best racing combinations.



#★X%±!!! HOT!

OPERATION

S L Y

Fox



Above: Thorp steel-reinforced counter gear gives the Fox gear box the extra strength it needs when a modified motor is used.

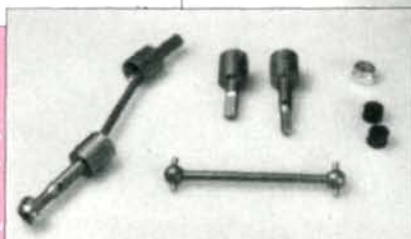


A Parma Matched Sanyo 6-cell pack provides the Fox with the extra juice it needs for all-out racing.

money, I'll explain which products improved the handling of the Fox and which were the most durable in my attempts to make the Fox a top contender.

Starting at the front: The addition of MRC's front stabilizer (part No. 5272) made one of the most noticeable improvements. By distributing pressure equally from side to side, it not only improves the handling of the front end but also improves cornering ability. Using this, the Fox's tendency to dip under cornering force and to lose critical balance is decreased.

For strength and to eliminate sloppy steering, the stock linkage was replaced with a Sullivan* 440 stainless-steel rod



Above: The Thorp Dog Bone conversion kit gets the power to the wheels with much less friction and more reliability. Right: Good-looking Advanced Engineering aluminum wheels, unlike wobbly, plastic, performance-robbing types; run true.

which won't bend on impact and throw out the alignment. To install this, cut the rod to the right length and use the stock inner rod-end threaded and glued fully onto the rod. For the outer end, Parma's 440 rod ends not only provide smoother steering but also add strength. This prevents the loss of steering which

occurs if the stock rod-ends pop off in a crash or when the car hits the barriers. Making the car sturdy is actually more important than improving its speed. The fastest car won't win if it breaks when it touches another car or a barrier.

Another protection device is JG's* Nerf Wing. This is designed to prevent rear arm damage while also eliminating

(Continued on page 126)



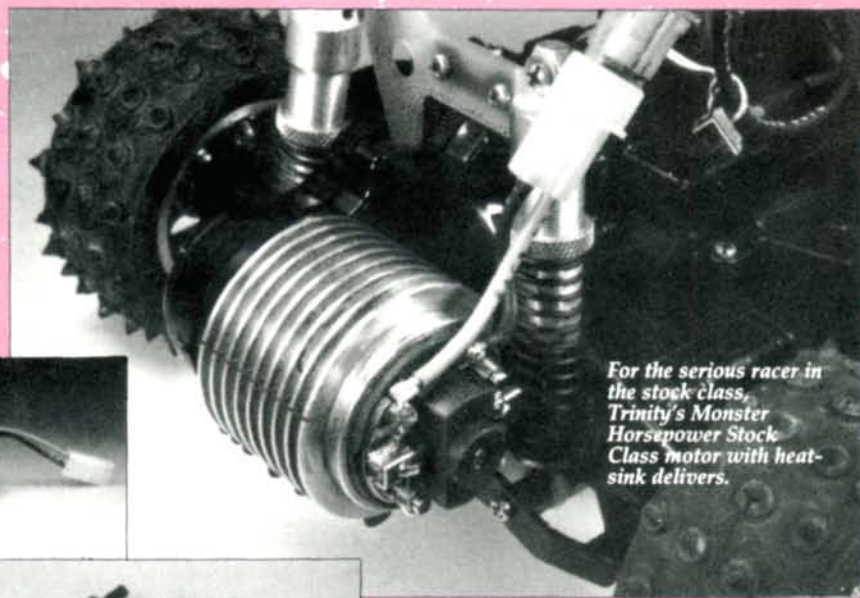
For a sure-footed Fox, a Tamiya sway-bar is a must. Almost one inch of travel is gained with a Brimrod shock set.



A JG Nerf Wing is used to fend off the wheels of your competitors.



A hole is cut in the chassis to aid in crystal changes. A welcome feature during the heat of competition.



For the serious racer in the stock class, Trinity's Monster Horsepower Stock Class motor with heat-sink delivers.



BOLINK

ELIMINATOR 12

PORSCHE HAS run away with one GTP race after another by offering racers durable turn-key cars. While others are tinkering with innovations, Porsche is mass-producing competitive cars. BoLink* has been mass-producing 1/12-scale cars for years, and their new Eliminator 12 is now ready to challenge any manufacturer on the track.

Both graphite and fiberglass versions of the Eliminator 12 are available. The front suspension consists of coil springs mounted above the steering blocks. Two friction, coil-over shocks control the flex of the rear T-bar. A pair of rubber O-rings are used to return the T-bar to neutral after twisting.

Ball bearings and a graphite rear axle are included in the graphite kit. The fiberglass version uses bushings and a steel axle. The Eliminator 12 is designed to use an electronic speed controller, and a clear Arundel GTP body is included with both versions.

CONSTRUCTION: The instructions are easy to follow



They don't come much more slippery than this! From any angle, the Eliminator displays the latest in aero-shaping, which is essential to peak performance.



with detailed, expanded-view drawings that really help. I built the fiberglass model, but added ball bearings. Construction was almost completed in an hour, but there was one problem: The two rear shocks took another hour to build! It's very difficult to screw the threaded rod into the shock body and the piston. Not wanting to scratch or distort the piston, you can't clamp it with pliers. One solution is to use a 2-56 tap to pre-thread the piston. When using the tap, make only two or three turns into the piston. The rod threads in more easily once you've

used a tap to get it started.

If you're going to use the Eliminator 12 for 4-cell racing, I suggest that you replace the standard, rear shock springs with softer springs. This will compensate for the lighter weight and slower speed of the 4-cell car.

I installed a Futaba* MC-9 electronic speed controller, FP-R2H micro-receiver and S-32 steering servo. The fiberglass was a little overweight, but not bad.

I replaced the standard spur gear

by Tai Sugahara

NEW-BREED $1/12$ -SCALE ROAD ROCKET

inferior handling traits—this car sticks like glue!

I was involved several times in wrecks that knocked the piston out of a rear shock, thus losing the coil spring. This only

and you can expect to see it showing up in A Mains around the country. Look out!

**Here are the addresses of the companies mentioned in this article:*

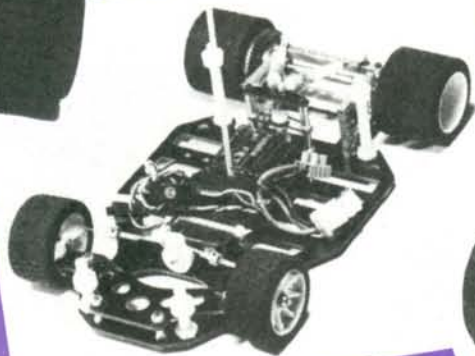
BoLink R/C Cars, 420 Hosea Rd., Lawrenceville, GA 30245.

Futaba Corp. of America, 555 W. Victoria St., Compton, CA 90220.

Kimbrough Products, 1430 East St. Andrews Pl. Unit E, Santa Ana, CA 92705. ■



The new BoLink Eliminator 12 features a unique dual-shock system to soak up the bumps.



The chassis of the Eliminator 12 can be bought in either fiberglass or graphite, both of which provide the racer with a competitive machine.



The plate the king pins are mounted to is adjustable by tightening or loosening the bolts. This will change the camber angle for the best possible footing.

with a new, 12-ball Kimbrough* gear. These gears provide an extremely smooth differential action.

PERFORMANCE: Racing the Eliminator 12 has been very easy. For running on carpet, I doped the full width of the rear tires and the inside third of each front tire. The car held any line I took through the turns. I couldn't get enough horsepower to reveal any

happened when the spring adjustment was too loose, and switching to a softer rear spring corrects this problem.

BoLink's Eliminator 12 is a straightforward, no-nonsense racing machine,

TROUBLESHOOT

(Continued from page 27)

tires should be left in their stock form. The spikes will be most effective if left long; the longer your spikes are, the more

effective they'll be. For concrete- or paved-surface performance, trim the knobs to about one-third of their original length.

For running your car on grass, trim off half of each knob. This will prevent the tires from digging into the grass too deeply, but still leave enough of each spike to get a good "bite."

If you run your car on a hard dirt surface, it's best to trim off about a third of each knob. You'll still want the tires to dig in a little, and removing too much of each spike will reduce traction so much that the tires will spin on the track's surface. Remember that track conditions vary, but these tire-customizing tips provide the information you need to get started.

Stabilizers are a common and inexpensive handling feature which can greatly improve your car's performance. There is a stabilizer kit on the market for almost every R/C car, but here I'll refer only to the Ultima. The guidelines for adding a stabilizer to your car vary, but it might be wise to put a stabilizer on your car if the following conditions are present: if your car has very sensitive steering or is oversteering; if the track surface is flat, or if the track surface is hard and you're experiencing a loss of traction.

I wouldn't recommend installing a stabilizer if your car is understeering

(Continued on page 92)



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DEPARTMENT OF RACING**

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WANTED

WANTED: to carry all makes of wheel radios

DESCRIPTION:
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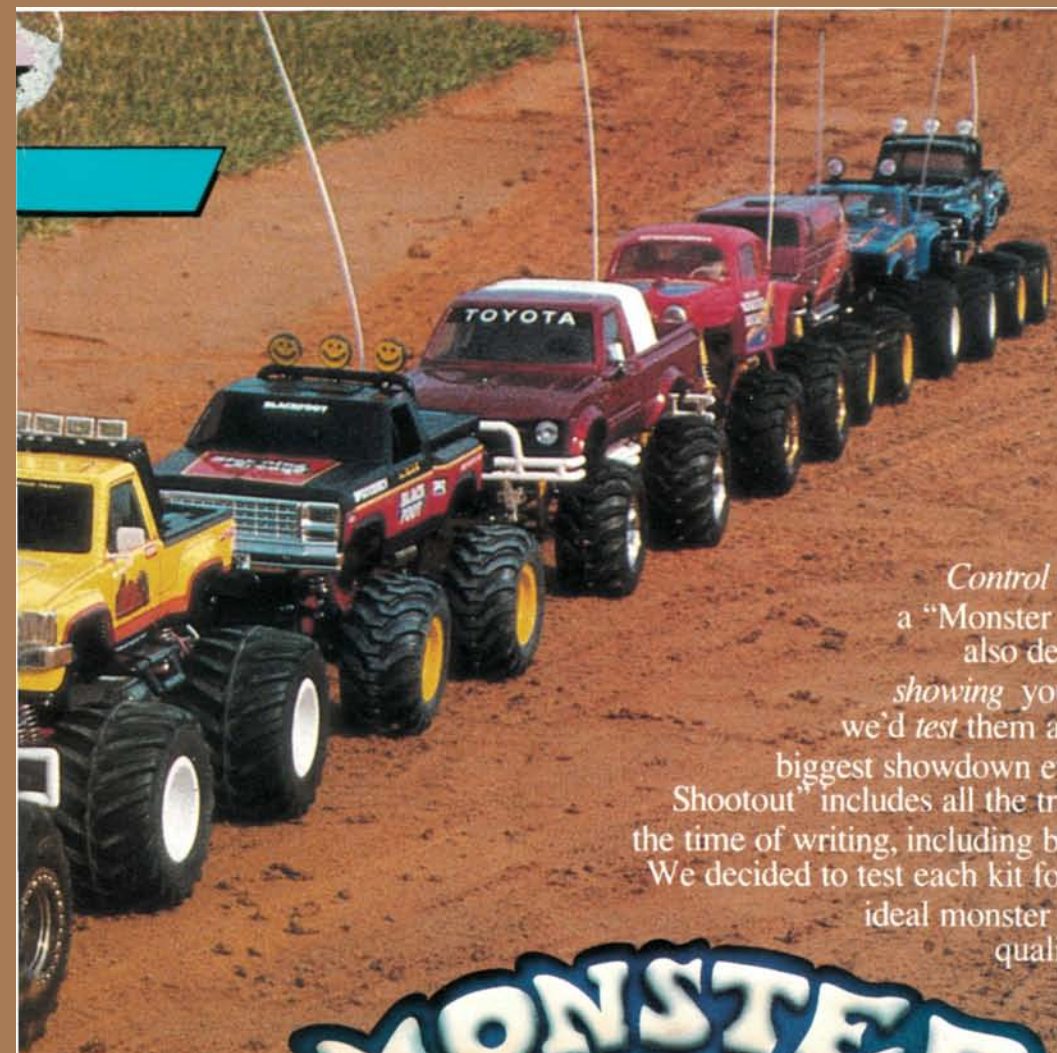
AGGRESSION SESSION

by STEVE POND

**HERE IT IS, THE BIGGEST BUNCH OF
MUD SLINGERS EVER TO BUTT HEADS.**

an ad

Suggest
their bucks. If one



MONSTER TRUCK SHOOTOUT

W HEN

THE STAFF of *Radio Control Car Action* decided to do a "Monster Truck Special Issue," we also decided that, instead of just showing you the available truck kits, we'd test them against one another in the biggest showdown ever! Our "Monster Truck Shootout" includes all the trucks that are available at the time of writing, including both 2WD and 4WD kits. We decided to test each kit for all the qualities that the ideal monster truck should have. These

qualities are: acceleration and top speed, pulling power, handling, duration of run with a 1,200mAh battery and price.

On completion of the tests, each truck was awarded points on a scale of 0 to 100, 0 being the lowest score and 100 being the highest.

The truck accumulating the most points was the best all-around truck of 1988!

Remember that some trucks may do exceptionally well in one event and not as well in others.

For this reason, we'll give results of each event, so that you can draw your own conclusions about which truck would best suit your needs. However, the winner of the testing was the one that did well in all events.

One truck didn't have to win any test; it just had to run consistently well. Certainly, some of the trucks had advantages in some of the events simply because of their designs, but they had an equal disadvantage in other events for which their designs weren't suitable.

Kit prices were also figured into the scoring, because we know that R/C enthusiasts want the most for the least. If a truck was capable of winning all the events and it cost \$2,000, it wouldn't be the best truck, simply

(Continued on page 87)

MARUI



BIG BEAR

Type Off-road Monster Truck
Scale 1/10

DIMENSIONS:

Overall Length 15 3/4 inches
Width 11 7/8 inches
Height 9 1/2 inches
Wheelbase 8 3/4 inches
Front Track 8 inches
Rear Track 8 3/4 inches

WEIGHT:

Gross
(w/rec. bat.) 5 lbs. 3 ozs.
Balance
(front/rear) 44.58/55.42

BODY:

Type Datsun pickup
Material Injection-molded plastic

CHASSIS:

Type Box
Material ABS plastic

DRIVE TRAIN:

Type (prim./sec.) ... Direct spur gear
Differential Bevel gear
Bearing Type Plastic

SUSPENSION:

Type
(front/rear) ... Independent trailing
 arm/Rigid axle

Dampening

(front/rear) Coil spring/
 Coil spring

TIRES:

Front: Type Terra
Dim. 3 1/4 x 4 1/2 inches
Rear: Type Terra
Dim. 3 1/4 x 4 1/2 inches

ELECTRICAL:

Motor M480RS
Speed Controller 3-step
 w/remote resistor
Battery Type Req. 6-cell flat,
 7.2V, 1,200mAh

ACCELERATION:

Distance 132 feet
Time 6.90 seconds
Speed 14.53mph

TAMIYA



BLACKFOOT

Type Off-road Monster Truck
Scale 1/10

DIMENSIONS:

Overall Length 17 3/4 inches
Width 11 inches
Height 10 5/8 inches
Wheelbase 9 5/8 inches
Front Track 8 5/8 inches
Rear Track 8 5/8 inches

WEIGHT:

Gross
(w/rec. bat.) 5 lbs.
Balance
(front/rear) 47.50/52.50

BODY:

Type Ford F-150
 step-side pickup
Material Injection-molded plastic

CHASSIS:

Type Perimeter frame
Material ABS plastic

DRIVE TRAIN:

Type (prim./sec.) ... Direct spur gear
Differential Bevel gear
Bearing Type Plastic

SUSPENSION:

Type
(front/rear) ... Double wishbone/
 Trailing arm

Dampening

(front/rear) Coil spring/
 Coil spring

TIRES:

Front: Type Terra
Dim. 2 1/4 x 4 3/4 inches
Rear: Type Terra
Dim. 2 1/4 x 4 3/4 inches

ELECTRICAL:

Motor RS-540S
Speed Controller 3-step
 w/remote resistor
Battery Type Req. 6-cell flat,
 7.2V, 1,200mAh

ACCELERATION:

Distance 132 feet
Time 6.38 seconds
Speed 15.52mph

TAMIYA



LUNCH BOX

Type Off-road Monster Van
Scale 1/12

DIMENSIONS:

Overall Length 14 1/4 inches
Width 11 1/4 inches
Height 9 1/4 inches
Wheelbase 8 1/4 inches
Front Track 8 1/2 inches
Rear Track 8 1/2 inches

WEIGHT:

Gross
(w/rec. bat.) 4 lbs. 7 ozs.
Balance
(front/rear) 45.07/54.93

BODY:

Type Dodge Van
Material Injection-molded plastic

CHASSIS:

Type Box
Material ABS plastic

DRIVE TRAIN:

Type (prim./sec.) ... Direct spur gear
Differential Bevel gear
Bearing Type Plastic

SUSPENSION:

Type
(front/rear) ... Independent swing
 axle/Rigid axle

Dampening

(front/rear) Coil spring/
 Coil spring

TIRES:

Front: Type Terra
Dim. 2 3/4 x 4 1/4 inches
Rear: Type Terra
Dim. 2 3/4 x 4 1/4 inches

ELECTRICAL:

Motor RS-540S
Speed Controller 3-step
 w/remote resistor
Battery Type Req. 6-cell flat,
 7.2V, 1,200mAh

ACCELERATION:

Distance 132 feet
Time 7.55 seconds
Speed 12.60mph

TAMIYA



MIDNIGHT PUMPKIN

Type Off-road Monster Truck
Scale 1/12

DIMENSIONS:

Overall Length 14 1/4 inches
Width 11 1/4 inches
Height 10 1/4 inches
Wheelbase 8 1/4 inches
Front Track 8 1/2 inches
Rear Track 8 1/2 inches

WEIGHT:

Gross
(w/rec. bat.) 4 lbs. 9 ozs.
Balance
(front/rear) 45.21/54.79

BODY:

Type '53 Ford F-100 pickup
Material Injection-molded plastic

CHASSIS:

Type Box
Material ABS plastic

DRIVE TRAIN:

Type (prim./sec.) Direct spur gear
Differential Bevel gear
Bearing Type Plastic

SUSPENSION:

Type
(front/rear) Independent swing
axle/Rigid axle

Dampening

(front/rear) Coil spring/
Coil spring

TIRES:

Front: Type Terra
Dim. 2 3/4 x 4 1/4 inches
Rear: Type Terra
Dim. 2 3/4 x 4 1/4 inches

ELECTRICAL:

Motor RS-540S
Speed Controller 3-step
w/remote resistor
Battery Type Req. 6-cell flat,
7.2V, 1,200mAh

ACCELERATION:

Distance 132 feet
Time 7.52 seconds
Speed 12.53mph

TAMIYA



BRUISER

Type Off-road Monster Truck
Scale 1/10

DIMENSIONS:

Overall Length 20 5/8 inches
Width 10 3/4 inches
Height 9 1/2 inches
Wheelbase 11 1/2 inches
Front Track 7 3/4 inches
Rear Track 7 1/2 inches

WEIGHT:

Gross
(w/rec. bat.) 9 lbs. 7 ozs.
Balance
(front/rear) 50.33/49.67

BODY:

Type Toyota pickup
Material Injection-molded plastic

CHASSIS:

Type Channel
Material Steel

DRIVE TRAIN:

Type
(prim./sec.) 3-speed trans./shaft
Differential Bevel gear
Bearing Type Bronze bushing

SUSPENSION:

Type
(front/rear) Solid axle/
Solid axle

Dampening

(front/rear) Coil spring/
Coil spring

TIRES:

Front: Type Terra
Dim. 2 1/4 x 4 3/4 inches
Rear: Type Terra
Dim. 2 1/4 x 4 3/4 inches

ELECTRICAL:

Motor RS 750SH
Speed Controller 3-step
Bat. Type Req. 6-cell, 1,200mAh
or 5-cell, 4,000mAh

ACCELERATION:

Distance 132 feet
Time 9.87 seconds
Speed 10.33mph

TAMIYA



CLOD BUSTER

Type Off-road Monster Truck
Scale 1/10

DIMENSIONS:

Overall Length 18 3/4 inches
Width 14 7/8 inches
Height 13 1/2 inches
Wheelbase 10 3/4 inches
Front Track 10 5/8 inches
Rear Track 10 5/8 inches

WEIGHT:

Gross
(w/rec. bat.) 9 lbs. 8 ozs.
Balance
(front/rear) 50/50

BODY:

Type Chevy Fleetside pickup
Material Injection-molded plastic

CHASSIS:

Type Bathtub
Material ABS plastic

DRIVE TRAIN:

Type
(prim./sec.) Direct spur gear
(front and rear)

Differential Bevel gear
Bearing Type Plastic

SUSPENSION:

Type
(front/rear) Rigid axle/
Rigid axle

Dampening

(front/rear) Coil spring/
Coil spring

TIRES:

Front: Type Terra
Dim. 4 1/4 x 6 1/4 inches
Rear: Type Terra
Dim. 4 1/4 x 6 1/4 inches

ELECTRICAL:

Motor RS-540S (2)
Speed Controller 3-step
w/remote resistor
Battery Type Req. 6-cell flat,
7.2V, 1,200mAh

ACCELERATION:

Distance 132 feet
Time 9.11 seconds
Speed 10.20mph

TAMIYA



MONSTER BEETLE

Type Off-road Monster Truck
Scale 1/10

DIMENSIONS:

Overall Length 16 inches
Width 11 inches
Height 9 5/8 inches
Wheelbase 9 5/8 inches
Front Track 8 5/8 inches
Rear Track 8 5/8 inches

WEIGHT:

Gross
(w/rec. bat.) 4 lbs. 11 ozs.
Balance
(front/rear) 46.67/53.33

BODY:

Type Volkswagen
Material Injection-molded plastic

CHASSIS:

Type Perimeter
Material ABS plastic

DRIVE TRAIN:

Type (prim./sec.) Direct spur gear
Differential Bevel gear
Bearing Type Plastic

SUSPENSION:

Type
(front/rear) Independent upper
 & lower arm/Trailing arm

Dampening

(front/rear) Oil-filled coil
 over (both)

TIRES:

Front: Type Spiked Terra
Dim. 2 1/4 x 5 inches
Rear: Type Spiked Terra
Dim. 2 1/4 x 5 inches

ELECTRICAL:

Motor RS-540S
Speed Controller 3-step
 w/remote resistor
Battery Type Req. 6-cell flat,
 7.2V, 1,200mAh

ACCELERATION:

Distance 132 feet
Time 6.94 seconds
Speed 14.41mph

KYOSHO



BIG BRUTE

Type Off-road Monster Truck
Scale 1/10

DIMENSIONS:

Overall Length 18 1/4 inches
Width 12 inches
Height 11 1/2 inches
Wheelbase 11 inches
Front Track 8 7/8 inches
Rear Track 8 7/8 inches

WEIGHT:

Gross
(w/rec. bat.) 6 lbs. 6 ozs.
Balance
(front/rear) 43.14/56.86

BODY:

Type Toyota pickup
Material Lexan

CHASSIS:

Type Monocoque
Material ABS plastic

DRIVE TRAIN:

Type (prim./sec.) Direct spur gear
Differential Bevel gear
Bearing Type Plastic

SUSPENSION:

Type
(front/rear) Double wishbone/
 Double wishbone

Dampening

(front/rear) Coil spring/
 Coil spring

TIRES:

Front: Type Terra
Dim. 3 1/8 x 5 1/4 inches
Rear: Type Terra
Dim. 3 1/8 x 5 1/4 inches

ELECTRICAL:

Motor LeMans 05 stock
Speed Controller 3-step
 w/remote resistor
Battery Type Req. 6-cell flat,
 7.2V, 1,200mAh

ACCELERATION:

Distance 132 feet
Time 7.25 seconds
Speed 13.90mph

MRP



HIGH ROLLER

Type Off-road Monster Truck
Scale 1/10

DIMENSIONS:

Overall Length 18 1/4 inches
Width 13 3/4 inches
Height 13 inches
Wheelbase 10 3/4 inches
Front Track 9 3/4 inches
Rear Track 9 3/4 inches

WEIGHT:

Gross
(w/rec. bat.) 8 lbs. 6 ozs.
Balance
(front/rear) 50/50

BODY:

Type Ford F-150 pickup
Material Lexan

CHASSIS:

Type Bathtub
Material ABS plastic

DRIVE TRAIN:

Type (prim./sec.) Bevel gear/shaft
Differential Adj ball/adj ball
Bearing Type Ball bearing

SUSPENSION:

Type
(front/rear) Independent upper
 & lower A-arm

Dampening

(front/rear) Coil spring/
 Coil spring

TIRES:

Front: Type Terra
Dim. 3 3/8 x 5 7/8 inches
Rear: Type Terra
Dim. 3 3/8 x 5 7/8 inches

ELECTRICAL:

Motor High-performance 540
Speed Controller Variable-resistor,
 forward-&-reverse
Battery Type Req. 6-cell flat,
 7.2V, 1,200mAh

ACCELERATION:

Distance 132 feet
Time 16.58 seconds
Speed 5.48mph

(Continued from page 83)

because it's out of the financial grasp of most modelers.

Now that you have an idea of how we scored the testing, let's get on with it!

The test site for the Monster Truck Shootout was Universal Supplies* in Orlando, FL. This facility features one of the best full-function 1/10-scale dragstrips and an excellent off-road track with a 300-foot oval on the outside and a challenging off-road course cut through the infield.

The dragstrip has a timing system similar to those on full-scale tracks, which use photocells for the most accurate timing. At the starting line, you go through the same routine as you would with full-scale racing. As you roll your car forward into the traps, you light up the "pre-stage" and then the "stage" lights. Your car is now properly lined up, and you're ready to go. As you leave the line, a timer is started, and this will determine your elapsed time for the full 132 feet. At the other end are three sets of photocells. The first set starts another timer, the second set is at the 132-foot mark and, as you pass them, you get the elapsed time of your run. The third set stops the additional timer to tell your top speed as you crossed the finish line. This track was used for the acceleration and top-speed portion of our testing.

For the remainder of the testing, we went to the off-road track. A BoLink* ABM timing system is used on this track,



also for indisputable results. This track is made of fresh red clay and maintained to perfection by Lloyd Lisco, the owner of Universal Supplies.

Also dedicating a great deal of his time to the track is Wess Eldridge. When Wess finishes his regular job at Universal Supplies, he heads out to the off-road track for the weekend racing. There, he runs the shop that, on race days, provides racers with a parts outlet where they can buy parts they may need during the races.

Wess and Lloyd really helped us with our testing. Without the use of their fine facility (and their shop, which provided emergency parts), the tests would never have been possible.

Another key element in our testing was the much-needed help and guidance of Rich and Vivian Edwards, owners of Wallkill Wheels Raceway and Hobbies* in Walden, NY. The Wallkill Wheels facility features indoor on-road and off-road tracks. Rich and Vivian are a pair of pioneers when it comes to organized truck competitions. They're among the first to

have sufficient insight to give truck enthusiasts their own forum to compete in head-to-head competitions. One of their truck events is the sled pull. Rich even custom-built a weight-transfer sled for the 1/10-scale electric trucks! The experience and enthusiasm this Wallkill-Wheels duo brings to monster-truck racing is positively inspirational.

The trucks tested in our shootout were Tamiya's* Clod Buster, Bruiser, Blackfoot, Monster Beetle, Lunch Box and Midnight Pumpkin; the High Roller from MRP*; the Big Brute from Kyosho* and the Big Bear from Marui*.

Sled Pull

The first test for our merry band of mud-slingers was the sled pull. The sled used for the testing was recently introduced by Polk's Model Craft/Aristo-Craft*, and it resembles the sled used for pulling in the full-scale events. For those of you who aren't familiar with sled-pulling, I'll explain it.



With the sled's rear wheels locked up, and a load of 25 pounds at the very top of the slide, the Clod Buster was still able to drag it down the track!



Rich had to place a cement slab on the pulling sled to finally stop the Bruiser at 41 pounds.

The sled is hooked to the back of the truck. An ideal location for the hook-up is the center line of the axle or a little below. If the sled is hooked to the truck above the plane of the axle, the truck's front end will lift as the load gets heavier. This isn't usually a problem with 2WD trucks,

but you won't be able to steer. The 4WD trucks would lose the bite of the front wheels and a poor pull would result.

After determining the best hitch location, each of the trucks started with 7½ pounds in the sled. From the starting line, each truck made its way down the track. As the sled was pulled forward, a weighted tray moved forward on the sled, making it progressively more

difficult to pull, and transferring the weight from the wheels in the back to the skid-plate up front. The further down the track it goes, the harder it is to pull. A distance of 23 feet was determined to be a full pull, because the weight tray would be at the very top of the sled at this distance. If one of the trucks wasn't able to make the full pull with a given weight, the distance it was stopped at was recorded, and it was given three more chances to improve its performance.

All the trucks were able to make the full pull with 7½ pounds, so we prepared for the next round where we used the 10-pound weight. The first to drop out of the competition (at 10 pounds) was the Monster Beetle from Tamiya. The distance of the Monster Beetle's first attempt was 14 feet, 5 inches. That distance was stretched to 15½ feet on the second attempt and to 17½ feet on the third. For scoring purposes, the three pulls were averaged and then multiplied by the weight pulled to give us a reference to score with. The Monster Beetle finished with 157. This number was compared with the results from the other trucks to determine each truck's

* First-place finish in this event

Truck	Sled Pull (weight/dist./score)	Acceleration (elapsed time/score)	Top Speed (average mph/score)
Big Bear	15 lbs./19.66 ft./52.68	6.90 sec./91.59	14.53mph/93.62
Blackfoot	10 lbs./16.50 ft./29.46	6.38 sec./100*	15.52mph/100*
Lunch Box	15 lbs./14.00 ft./37.50	7.55 sec./83.70	12.60mph/81.18
Midnight Pumpkin	15 lbs./14.16 ft./37.86	7.52 sec./84.04	12.53mph/80.73
Big Brute	15 lbs./17.16 ft./45.89	7.25 sec./87.17	13.90mph/89.56
Clod Buster	41 lbs./13.66 ft./100*	9.11 sec./69.37	10.20mph/65.72
Monster Beetle	10 lbs./15.66 ft./28.07	6.94 sec./91.07	14.41mph/92.84
Bruiser	41 lbs./11.33 ft./83.04	9.87 sec./64.03	10.33mph/66.56
High Roller	30 lbs./13.33 ft./71.43	16.58 sec./38.12	5.48mph/35.31



Wess Eldridge, who mans the shop on the weekends to supply the racers with spare parts in their moment of need, also came through for us with our monster-truck testing.

score in the 0-to-100-point range.

The next to fall prey to the sled at a weight of 10 pounds was the Blackfoot, also from Tamiya. I think that the Blackfoot's problems resulted from a hard tire compound and a low overall weight. As the Blackfoot began to slow under the weight, the rear tires began to spin and smoke! The first pull was stopped at 15 feet, the second ended at 16 feet 7 inches and the third stopped at around 18 feet. The Blackfoot's total was 165.

The rest of the trucks made a full pull at 10 pounds. At the next weight of 15 pounds, the Pumpkin, Lunch Box, Big Brute and Big Bear were all eliminated. The first two to go were the Lunch Box and Pumpkin. Having the same chassis, they were only two points apart. The Lunch Box turned in 13-, 14.5- and 14.5-foot pulls at the 15-pound weight for a total of 210. The Midnight Pumpkin finished just ahead of the Box with 13.5-, 14.5- and 14.5-foot pulls at 15 pounds for a total of 212. Next to drop out at 15 pounds was the Kyosho Big Brute. With pulls of 17, 17.5 and 17 feet, the Big Brute finished with a total score of



Rich prepares the pulling sled for another ride down the track with the Big Brute leading the way.

257. The last 2WD to drop out at 15 pounds was the Big Bear with pulls of 19, 20.5 and 19.5 feet for a total of 295.

The only ones left were the 4WD monsters that we'd predicted would go the distance during this part of the testing.

All three 4WD trucks dragged the sled to a full pull with weights of 17½ pounds, 22½ pounds and 25 pounds. The High Roller eventually dropped out at a weight of 30 pounds! Before losing traction, the High Roller dragged the 30 pounds to 12.5, 13.5 and 14 feet for a total score of 400.

The real battle was between the Clod Buster and the Bruiser. Both went to full pulls at 30 and 35 pounds, but the Bruiser finally lost its footing at a distance of 11.5 feet

Handling (avg. per lap/score)	Duration (min./score)	Price (sug. ret. \$/score)	Total Score
23.14 sec./82.23	11.05 min./57.40	\$99.95/100*	477.52 *
21.13 sec./90.06	11.49 min./59.69	\$125.00/79.96	459.17
22.98 sec./82.81	14.47 min./75.17	\$117.00/85.42	445.28
22.86 sec./83.25	14.55 min./75.06	\$140.50/71.13	432.07
19.03 sec./100*	9.33 min./48.46	\$169.95/58.81	429.89
23.10 sec./82.38	13.07 min./67.90	\$305.00/32.77	418.14
20.72 sec./91.84	11.06 min./57.45	\$178.50/55.99	417.26
28.46 sec./66.86	8.04 min./41.77	\$394.00/25.36	347.62
34.09 sec./55.82	19.25 min./100*	\$379.95/26.30	326.98

hauling 41 pounds! The second pull was another 11.5-footer, while the third dropped to 11 feet for a total score of 465.

As you may have guessed, the Clod Buster took the sled-pull competition at the same weight of 41 pounds going 14.5, 12.5 and 14 feet for the winning total of 560.

The results of our sled pull are accurate and

the speed runs for the day.

Two batteries for each truck were charged on our NorCal Avionics* charger and set aside to cool for the drags. Prior to use, they were peaked at 6.5amps and installed in the trucks. This charger is one of the best peak chargers that I've ever used. Charging time is considerably less than that of other peak chargers, and if it doesn't charge to 100 percent capacity, it's the closest



Even though the Aristo-Craft Pulling Sled started to buckle at the knees with a weight of 41 pounds on its back, it didn't give us one problem in over 70 heavy-duty pulls.

conclusive. With many other truck pulls, the trucks have been modified, and the results may have been different if changes hadn't been made. Our purpose was to test these trucks in stock condition. The one thing the Clod Buster had going for it was inertia. It was able to get up enough speed to carry it through when the weight moved toward the top of the slide. Nevertheless, as previously mentioned, these trucks are being tested in stock condition, and the Clod Buster brought home the bacon in a big way!

Acceleration and Top Speed

For the acceleration and top-speed portion of our test, the trucks were run at the famous International Supplies* 1/10-scale dragstrip with the help of Lloyd Lisco and Wess Eldridge. They opened the track in the wee hours of the morning and operated the elaborate timing system so that Rick Edwards and I could make

you can get. Among its many other features, the NorCal charger includes a "charge-fault" function. This won't allow the charge cycle to begin if the polarity between the charger and the battery isn't correct. This is important, because having incorrect polarity at the time of charging usually results in damage to your battery or charger.

The MRP High Roller (the slowest truck of the bunch due to its very low gear ratio) turned in times of 16.70 seconds at 5.52mph, 16.41 seconds at 5.48mph, 16.53 at 5.49mph, 16.97 seconds at 5.38, 16.81 at 5.40mph and 16.30 at 5.62mph. The scoring here was a little easier than with the sled pull. The average top speed and average elapsed time were recorded, and points were awarded accordingly. The truck with the highest top speed was awarded 100 points, and the scores of the others were determined by calculating what percentage their top speed was of the highest speed. Acceleration

(Continued on page 138)

"Our purpose was to test these trucks in stock condition."

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TROUBLESHOOT

(Continued from page 78)

(insensitive steering control) or if you're racing on a bumpy track. To cure understeering or cope with a bumpy track, I'd work on shock settings to improve your performance.

Installing a stabilizer on the front of the Ultima is very easy. The stabilizer is mounted to the underside of the radio plate in ridges that have been thoughtfully placed there in case you need them. It is held in place by two 2.6x6 self-tapping screws in the rear, and the stabilizer arms are positioned through factory-drilled holes in the upper control rods. It's all very quick and easy.

In other cars, stabilizers may have to be installed using a ball-link system, but the end result is the same. The stabilizer will make your steering less sensitive and put more downward pressure on the front tires, so causing them to hug the track.

Big performance with a few little improvements! I hope they work for you—they've helped me. *Good luck, and happy motoring!* ■

PUMPKIN

(Continued from page 34)

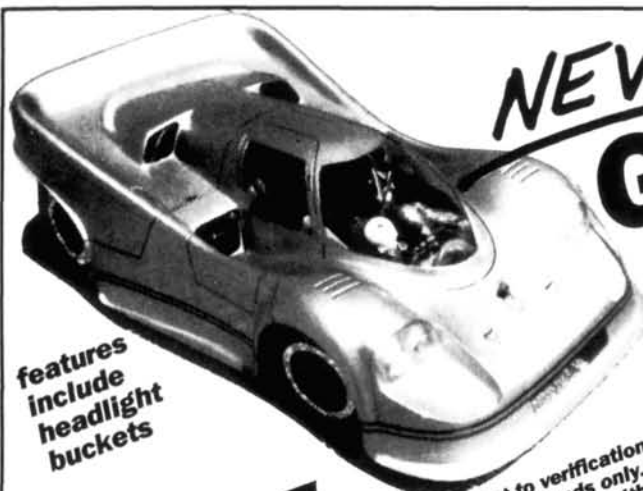
this, or any other Tamiya kit, you didn't follow the instructions (barring the possibility of an unlikely kit defect). *Follow the instructions carefully!* There's no further advice I can offer. *Carefully* following the instructions will guarantee success.

To complete the kit in running form, you'll need some accessories, and I can offer a little guidance here. A 2-channel radio system, a 7.2V battery pack and a battery charger are necessary. I chose the Futaba* Magnum Jr. radio system, as this is the most reliable system on the market.

The Magnum Jr. is available with the standard FP-S148 servo or, for compact applications, the FP-132 servo. The Pumpkin will accommodate either size servo, and both have enough power. However, I recommend sticking with the standard servo, because that particular package is less expensive and just as reliable.

For a battery, any 6-cell flat pack will easily fit in the Pumpkin. The pack used for this review is Tamiya's new 1,700mAh 6-cell battery. For those of you who don't already know, the mAh capacity determines the running time of your R/C car. The new "EX" 1,700mAh battery pack increases run time by more than 25

(Continued on page 94)



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PUMPKIN

(Continued from page 92)

percent, so if you want to spend a little more time on the track, pick up one of these packs.

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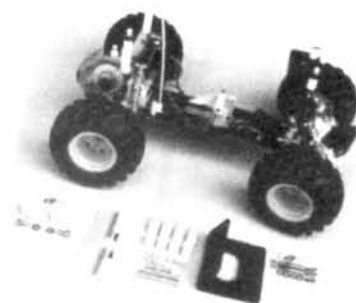
have left to spend. There is a wide variety of chargers available, ranging from a trickle-charger to the most advanced peak-chargers. If you choose a peak-charger and plan to use the EX 1,700mAh battery, be sure that the charger is capable

of charging a battery that holds 1,700mAh. Once you have these accessories, assemble the Pumpkin chassis at your own pace, and save the body detailing for last.

(Continued on page 100)

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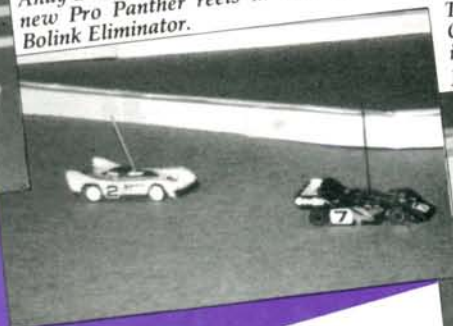
1/12-Scale Winternationals

by RICH HEMSTREET

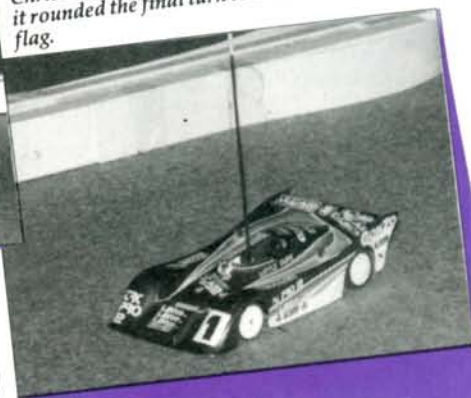
Top drivers in the Modified A Main are ready to do battle for the top honors at the Winternationals in Grand Rapids. Below: Spectators patiently await the start of the A Main as the top cars stand by on the starting grid.



Andy Dobson, of Team Parma, driving the new Pro Panther reels in Carl Christy's Bolink Eliminator.



This is one view the competition didn't get of Chris Doseck's sharp-looking TRC Pro 12 as it rounded the final turn to take the checkered flag.



IN 1988, THE MIDWEST features the 1/12-scale "Triple Crown." There are three major events; all open to racers from across the country. First were the recent '88 Winternationals in Grand Rapids, MI. In July, the ROAR 1/12-scale Nationals will be held in Detroit, and the third jewel in the "Crown" will be the annual U.S. Indoor Championships, to be held in Cleveland at Thanksgiving time.

Nearly 160 racers took part in the Winternationals. This was the first ROAR-sanctioned event ever held by the Grand Rapids Rivertown Racers. The two-day race started with two rounds of practice at 6 a.m. on Saturday. After the noon-time drivers' meeting, the racing was underway. Each driver had three

qualifying heats on Saturday and one final qualifier on Sunday morning.

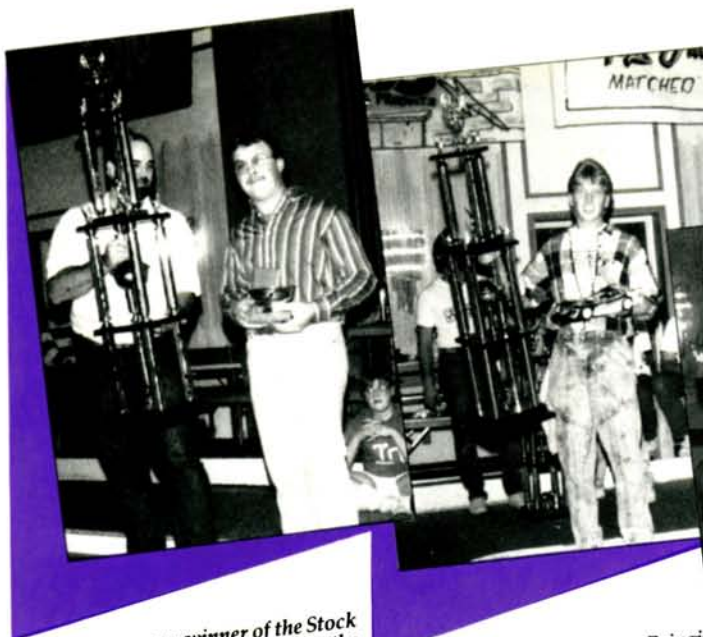
The televisions in the racers' rooms at the Marriott Hotel were connected to a trackside computer. This way, all racers could tell at a glance when they had to be in the technical area for their races. The Rivertown Racers also had several battery chargers set up at the trackside so that the drivers could peak the batteries just before taking to the track. For a first-time event, the race went extremely well. The '88 Winternationals were co-sponsored by Parma, Associated, Berger Chevrolet, Hobby World, Grand Haven Jewelers and McCarthy & Sons.

The Top Qualifier in stock class was

Phil Zimmerman, driving an Associated* 12L for 39 laps. Three other drivers also turned 39 laps, while the rest of the stock-A-Main drivers each recorded 38 laps.

The stock-class A Main had five Associated 12Ls, two TRC* Pro 12s, two TQ Eagles and one BoLink* Eliminator 12. Most of the stock drivers don't have any factory support.

In the modified class, Chris Doseck captured TQ honors with a 43-lap run. Doseck was driving a CAM*-powered TRC Pro 12. Andy Dobson of Team Parma* drove his new Pro Panther 12 to



Phil Zimmerman, winner of the Stock A Main, and top qualifier for the event, shown here picking up the pay-off for all his hard work.

With a smile, Chris Doseck, winner of the Modified A Main, hoists the massive first-place trophy.



Bringing home top honors in the course contest was Rich Jones.

Below: Lynn Horne, of NorCal Avionics, holding their new Accu-Charger 1, flanked by Chris Doseck and Bud Bartos.



MODIFIED A MAIN

Final Pos.	Qual.	Name	Chassis	Motor	Speed Control	Batteries	Tires Front/Rear	Tire Dope
1	1	Chris Doseck	TRC Pro 12	CAM	Novak 1X	Gonzo	TRC GRN/GRN	Paragon
2	3	Dave Hechler	TRC Pro 12	CAM	Novak 1X	Gonzo	TRC GRN/GRN	Paragon
3	2	Andy Dobson	Parma Pro Panther	Parma	Tekin Pro	Parma Super SC	Parma GRN/GRN	Parma Trac-Tite
4	5	Tyree Phillips	TRC Pro 12	Revtech	Novak 1X	Sanyo SC	TRC GRN/GRN	Paragon
5	8	Bill Jeric	Parma Pro Panther	Parma	Novak 1X	Parma Super SC	Parma GRN/GRN	Parma Trac-Tite
6	7	Carl Christy	BoLink Eliminator	Revtech	Novak 1X	Gonzo	BoLink GRN/GRN	Paragon
7	6	Bud Bartos	TRC Pro 12	CAM	Novak 1	Gonzo	TRC GRN/GRN	Paragon
8	4	Dan Louis	BoLink Eliminator	Revtech	Novak 1X	Gonzo	BoLink GRN/GRN	Paragon
9	10	Terry Rott	Associated 12L	Reedy	Novak 1X	Sanyo SC	Assoc. GRN/GRN	Paragon
10	9	Dennis Moscatelli	Delta P-12	Twister	Novak 1X	Sanyo SC	TRC GRN/GRN	Paragon

STOCK A MAIN

Final Pos.	Qual.	Name	Chassis	Speed Control	Batteries	Tires Front/Rear	Tire Dope
1	1	Phil Zimmerman	Associated 12L	Tekin Std	Gonzo	TRC BL/GRN	Trac-Tite
2	4	Paul Martin Jr.	TRC Pro 12	Tekin	Gonzo	TRC GRN/GRN	Paragon
3	8	Russell Mustar	Associated 12L	Novak 1	Gonzo	TRC GRN/GRN	Revtech
4	2	Mike Pulfer	TQ Eagle	Tekin Pro	Trinity	TQ Eng. TRC	Paragon
5	3	Ron Ferguson	Associated 12L	Tekin Std	Gonzo	BL/GRN TRC	Tiger Milk
6	5	Bob Wilkinson	Associated 12L	Novak 1	Sanyo	TRC GRN/GRN	Homemade
7	7	Kevin Cowel	Associated 12L	Novak 4	Shadow	TRC GRN/GRN	MRP
8	9	Steve Radecky	BoLink Eliminator	Novak 4	Gonzo	TRC GRN/GRN	Paragon
9	6	Mike Seubert	TQ Eagle	Tekin Pro	Gonzo	TQ Eng. TRC	Paragon
10	10	Carri Gerber	TRC Pro 12	Novak 1	Stage III	GRN/GRN	Paragon



Above: Terry Rott's Reedy-powered Associated RC 12L took 9th place in the A Main.

Right: The Parma ace, Andy Dobson, sported this Pro Panther 12, which is new to Parma's line.



Left: The TQ Eagle, which took 4th and 9th places in the stock class, features a graphite-tub design.

Right: In tenth place was Dennis Moscatelli, who used three shocks on the rear pod of his Delta P-12.

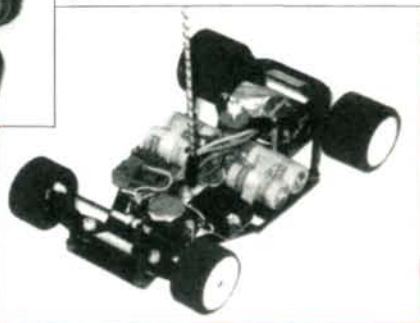
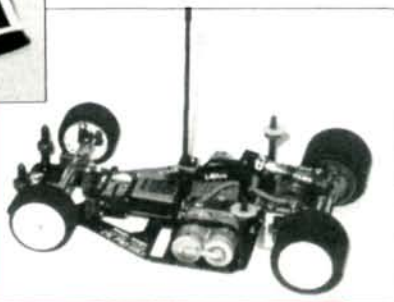


Left: Even after the "Little Dude," Chris Doseck, burned up the track for first place, his car looked as though it was just coming out for the next heat. Right: New on the Bolink Factory racing cars is a stabilizer bar on the rear pod between the two shocks.



Left: Chris Doseck's winning TRC Pro 12 features a CAM motor and a Novak IX speed controller.

Below: A close-up of Andy Dobson's Pro Panther 12 and the Tekin speed controller reveals the Parma Modified motor, which pushed him to third place.



second fastest (also with 43 laps). All of the other A-Main drivers finished qualifying with 42 laps. The modified A Main was made up of four TRC Pro 12s, two Parma Pro Panther 12s, two BoLink Eliminator 12s, one Associated 12L and one Delta P-12.

Doseck's car used a Novak* 1X speed controller, as did seven other A-Main drivers. Doseck said that the 1X really gives him lots of low-end punch. Several drivers were testing a CMW* prototype speed controller, and they found that they got 30 seconds more run time. However, they switched to Novak's for the main event.

On the motor front, the A Main consisted of three CAMs, three Revtechs*, two Parmas, one Twister* and one Reedy*. None of the motors appeared to have a clear advantage, and this made for great racing all through the Main.

In the stock A, Zimmerman beat Paul Martin Jr.'s TRC Pro 12; Russell Mustar finished third, driving an Associated 12L; fourth place went to Mike Pulfer, with his TQ Eagle.

The modified A Main saw Doseck being chased by Dobson for most of the race. Near the end, Dobson's batteries

watches as well.

Next year's Winternationals Festival of Racing should be even bigger, as the '88 racers spread the word to those who missed it.

*Here are the addresses of the companies mentioned in this article:

Associated Electric, Inc., 3585 Cadillac Ave., Costa Mesa, CA 92626.

TRC, P.O. Box 478, Oakboro, NC 28129.

BoLink R/C Cars, Inc., 420 Hosea Rd., Lawrenceville, GA 30245.

Parma International, Inc., 13927 Progress Pkwy., North Royalton, OH 44133.

CAM Racing Motors, Rte. 3, Box 680, Huntersville, NC 28078.

Novak, 128 East Dyer, Santa Ana, CA 92707.

dumped, and Dave Hechler got by on the last lap for second place. Doseck finished with 43 laps; one up on Hechler. Tyree Phillips finished fourth.

Rich Jones won Concours with a beautiful orange McLaren. Jones estimates that he spent 40 hours working on his winning effort.

The A Mains in both stock and modified were won by the TQ, so Zimmerman and Doseck each carried home a lot of hardware. Engraved cups were awarded for the TQ runs, and the A-Main winners received trophies and engraved Seiko

CMW International, 2101 Midway Rd., Suite 250, Carrollton, TX 75006.

Revtech R/C Products, 9525/B Cozycroft Ave., Chatsworth, CA 91311.

Twister, 371 Powell #B102, Azusa, CA 91702.

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PUMPKIN

(Continued from page 94)

When I started to build radio-control cars, I tried to steer clear of those with ABS bodies because, compared with those which have clear polycarbonate bodies that are painted from the inside, they're more difficult to paint. The ABS bodies, such as the one included with the Midnight Pumpkin, must be painted on the outside. Since my early modeling efforts, I've taken a liking to ABS bodies for non-racing applications because they have much better detail. This distinguishes a good-looking car from a great-looking car (or truck).

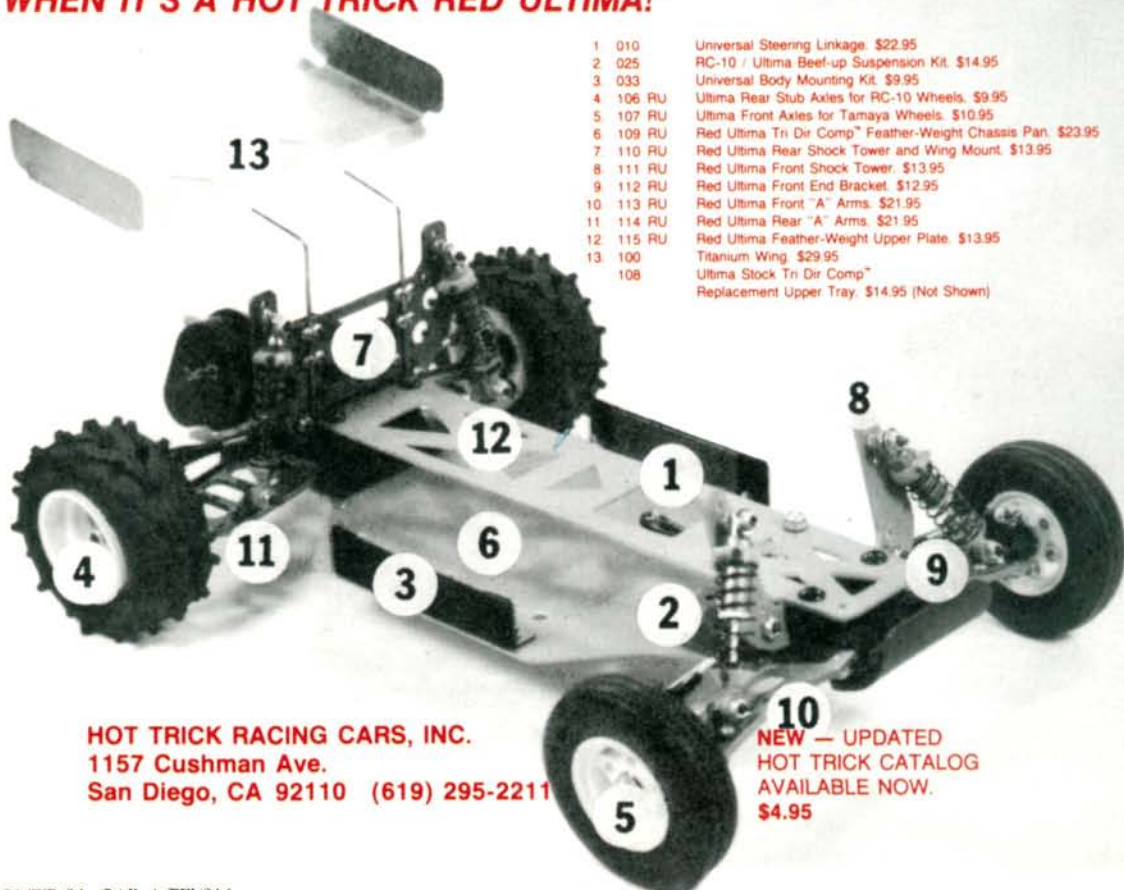
For a long time, I was discouraged from using automotive lacquers on ABS because I'd been told that lacquer thinner would damage the ABS beyond repair. It is true that if you pour the thinner over an ABS body, it will probably soften into a shapeless blob of plastic. But if the paint and thinner are mixed properly and applied in light coats, the result will be the most beautiful paint job with a lustrous sheen which rivals any professionally produced finish.

For those of you who know how to operate an airbrush and wish to try your

(Continued on page 104)

(Continued on page 104)

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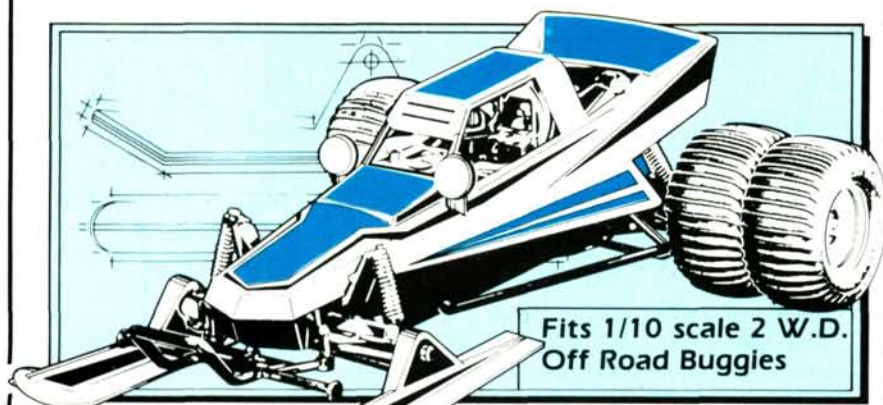


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PUMPKIN

(Continued from page 100)

hand at a lacquer paint, I'll give you a few tips. Choose the color you wish to use from the huge variety available at your body supply shop, and pick up some thinner and retarder while you're there. Make a fifty-fifty mixture of paint and thinner, adding retarder as directed on the can. Retarder is used to slow the drying process so that the paint dries with a glossy finish. Apply the paint with an airbrush, starting with light coats and working to heavier ones when the original body color is no longer visible.

The job will require at least 20 coats of paint but, when it's done, there won't be a polycarbonate body to match it. When the paint is completely dry (this will probably take overnight), rub the body by hand with liquid ebony until the paint has a deep shine. If the paint is a little rough before rubbing it out, lightly sand with some 600- to 1,000-grit sandpaper and then buff. I'm sure you'll be pleased with the results.

If you've never used an airbrush, I wouldn't recommend trying this type of painting. There are alternatives which are less likely to damage the body if you make a mistake. An automotive touch-up paint can be used if you're in a hurry to get on the track, but it won't give you a glossy finish unless you do a great deal of sanding.

Another alternative is to use an enamel paint. Enamel has better covering properties than lacquer and will usually cover in three or four coats. The disadvantage of enamel paints is their longer drying time. Testors Model Master series enamel dries quite quickly if you don't try to cover your model in one coat. (You should never do this anyway.)

Once the painting is complete and the detailing is finished, you can head for the R/C junkyard to do some crushing!

It's fortunate that the Pumpkin test is in the same issue as our "Monster Truck Shoot-Out," as I not only had a chance to fully test the Pumpkin, but also to test it against other trucks. The Pumpkin was tested for acceleration, top speed, pulling power, handling and battery duration.

The acceleration test was held at the Universal Dragstrip in Orlando, FL. The Pumpkin was given ten chances at the 1/10-scale quarter-mile with five runs on a battery. The Pumpkin turned in an average of 7.23 seconds per run at a speed of 12.34mph. Although this is a respectable speed as far as the monster truck goes, the Pumpkin took a back seat to the Blackfoot

(Continued on page 106)

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PUMPKIN

(Continued from page 104)

and Monster Beetle.

The reason for the lower top speed was the smaller tire diameter. The Blackfoot and Monster Beetle have the same gear ratio as the Pumpkin. When running at top speed, the larger overall diameter of the Blackfoot's tires gave it the advantage.

For the next test, I hooked the Pumpkin to the new pulling sled from Polk's Model Craft. The Pumpkin was given two fresh batteries and we began the pulling test. The weights used on the sled were in increments of 5 pounds; we started with 5 pounds and worked our way up the scale with a series of full pulls until we reached

the 25-pound mark. The 25 pounds finally stopped the Pumpkin at a distance of 14.5 feet. The smaller and softer tires gave the Pumpkin the advantage over the Blackfoot and the Monster Beetle in the pulling contest.

The off-road track at Universal Sup-
(Continued on page 109)

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PUMPKIN

(Continued from page 106)

plies* was the site of the handling test. The Pumpkin was navigated around the track, and the lap times were recorded for comparison. Because the Pumpkin is designed to wheelie, the front end is rather light. This was a major factor affecting the lap times as the Pumpkin plowed its way through each turn. With a steady throttle, the Pumpkin exhibited a severe understeer, as the throttle wanted to raise up the front end. Even when decelerating, a noticeable amount of understeer was evident.

To negotiate the hairpin turns with any amount of speed, it was necessary to flip the throttle to reverse for a moment to get the rear end to swing around. Even with this handicap, the Pumpkin was still able to turn in some pretty respectable lap times, coming in just behind the Blackfoot.

The final test for battery duration was on a hard-packed dirt oval where we could hold the throttle wide open to eliminate the throttle on-and-off that kills your battery. The battery was changed to a 1,200mAh battery to allow those of you who don't have a 1,700mAh battery to make comparisons.

The first effort resulted in a 13.5-minute run time. Another battery was charged, and the Pumpkin hit the oval one more time. Once again, the Pumpkin turned in a 13.5-minute run time.

This was the end of my testing, but there had seemed to be something that I hadn't tested. Although the Pumpkin didn't perform as well as its bigger brothers, a "fun factor" was absent from our objective test. As with the Lunch Box, the Midnight Pumpkin puts on a hell of a show as it rides wheelies from one corner to the next, and the 1953 Ford pickup body gives the Pumpkin a ruggedness all its own. This is a sharp looker and a credit to the Tamiya line of trucks and, even though it won't win the "Monster Nationals," it scores a perfect "10" in the "Funniest Funny Car" class.

**The following are the addresses of the manufacturers mentioned in this article:*

MRC/Tamiya, 2500 Woodbridge Ave., Edison, NJ 08817.

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RUG RAT

(Continued from page 45)

class "nostalgia" drag racers, with their pro-stock-style tube frames and fiberglass reproduction bodies. The many simulated, quick-disconnect fasteners are actually chrome foil dots made by using a hole-puncher. The styrene-plastic rear spoiler-wing mounts to the body and is retained by the rear mounting posts and clips. The large air box on the hood is modified, clear-plastic model-airplane canopy, trimmed to fit the windshield contours and mounted from below through a cutout in the hood. This gives a prototypical appearance, as the full-scale scoops and air boxes are mounted to the top of the engine, and the hood, with its precisely fitting cutout, is lowered into place over the scoop.

I used nearly every Pactra* solid color to create the loud paint job. A 2-inch wide stripe over the top of the car was masked off after the windows were covered over. I sprayed red from the rocker panels to the side trim and around the front and rear bumpers. This "fogged" into orange and was continued to the tops of the fenders. The top part of the body was painted yellow and fogged into the orange. (An airbrush is necessary to accomplish

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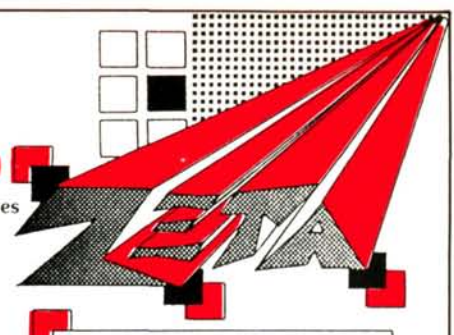


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this finish.)

The masking tape was then removed to uncover the stripe, and yellow was fogged into the ends of the stripe area. This was followed by a spectrum of colors (orange, red, violet, blue and green), each blending into the next as the stripe goes up over the roof.

Halfway toward the rear, the order of the colors reverses, and they continue until they end at the yellow. It takes a lot of patience and careful paint-thinning to produce this subtle, blended effect, and those who want to try this should practice before attempting such a complicated scheme. I wouldn't normally spend so much time and effort on a race car, but I reasoned that it won't ever go fast enough to damage its paint in a crash! The bumpers were left in the original red, and just enough chrome-foil trim was added to highlight the body lines.

The lettering and markings are assorted Autographics*, Parma* and Coverite† decals, along with MonoKote* Chevy emblems on the doors. This car really stands out in a crowd and looks awesome on the track!

(Continued on page 114)



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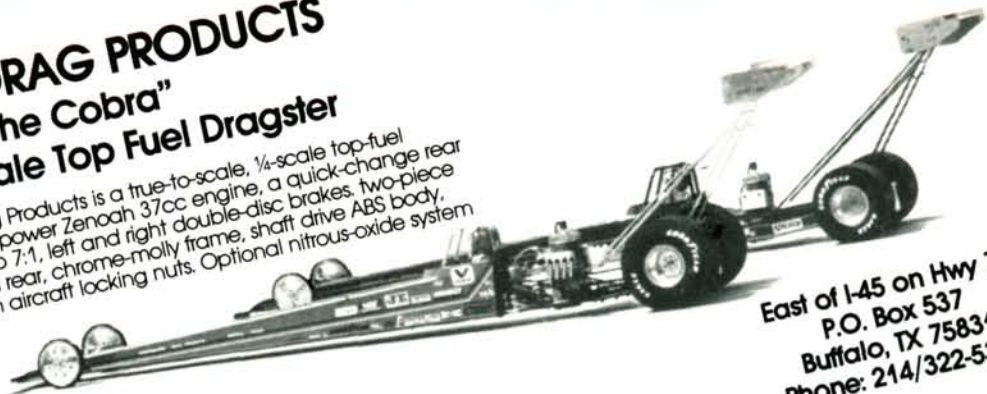
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RUG RAT

(Continued from page 112)

*The following are the addresses of the manufacturers mentioned in this article:

MRC/Tamiya, Model Rectifier Corp., 2500 Woodbridge Ave., Edison, NJ 08817.

AJ Twinn-K, Box 31228, Indianapolis, IN 46231.

Associated Electric, Inc., 3585 Cadillac Ave., Costa Mesa, CA 92626.

Futaba Corp. of America, 555 W. Victoria St., Compton, CA 90220.

Parma International, Inc., 13927 Progress Pkwy., N. Royalton, OH 44133.

Pactra (Plasti-Kote), 410 N. Michigan Ave., Rm. 1280, Chicago, IL 60611.

Coverite, 420 Babylon Rd., Horsham, PA 19044.

Autographics of California, 1700 14th St., Bakersfield, CA 93301.

MonoKote, distributed by Top Flite Models, 2635 S. Washash Ave., Chicago, IL 60616. ■

RAIDER

(Continued from page 56)

shocks that can be mounted in the upright position. Mounting locations for a horizontally mounted mono-shock are also molded into the front A-arm. The front and rear upper control arms on the Raider can also be exchanged for a set of adjustable control arms. The tire-mounting system is identical to the mounting system used on the more expensive cars in the Kyosho line and allows you to change to a set of larger wheels and gives you more options for tread patterns. Starting to get the picture yet?

CONSTRUCTION: Prior to assembly, you'll need to buy a few accessories to make the Raider fully operational. The kit requires a 2-channel radio system, a 7.2V, 6-cell flat pack and a battery charger. The radio system used in this test is the Kyosho Pulsar 2000. This is a fully proportional pistol-grip radio system with a compact receiver and two precision

(Continued on page 118)



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For more information contact McAllister Racing, 4545-5H Industrial St., Simi Valley, CA 93063.



1/10-SCALE BODY

The new 1/10-scale Streamliner body from Craig Model Co. It sports a very scale-looking shape with injector air scoop, rear wing and exhaust mounting plates included with the untrimmed Lexan body. Available soon, a clear Lexan chassis with a built-in mini steering-servo mount. It has room in the aft section for 10 sub-C Ni-Cds and your hottest racing gear. The wheel base is 24½ inches long. Wire/distributor kit and headers are optional.

For more information contact Craig Model Company, P.O. Box 142, 19515 FM 149, Houston, TX 77070.



8-CELL BATTERY PACK

Parma's new No. 322690 8-cell battery pack is ideal for a truck or car enthusiast who wants a little more power and speed. Computer-matched cells ensure the longest possible run time and peak performance.

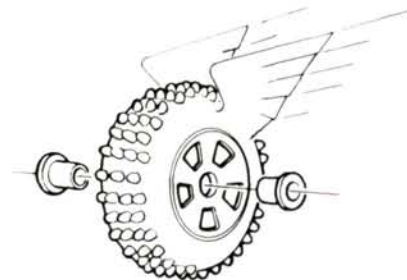
For more information contact Parma International, Inc., 13927 Progress Pkwy., North Royalton, OH 44133.



LEXAN BODIES

Dahm's is proud to introduce two new off-road bodies which are sure to be a hit on the off-road circuit. The Warrior body (left) is designed to fit Yokomo and Tamiya 4WD off-road cars. The Raider body (right) is a low-profile race-winning design that fits the RC 10, Kyosho's Optima and Ultima, the Schumacher Cat and most other 2WD off-road cars. Also available is Dahm's Big Fin wing kit. This wing is designed to provide maximum downforce and assembles in minutes.

For more information on these and other Dahm's products contact Dahm's, P.O. Box 386, Cupertino, CA 95015.



BRONZE BEARINGS

A.J. Products has announced a line of bearings for MRC/Tamiya 1/10-scale cars. These bronze bearings are offered as an alternative to ball bearings. They are virtually indestructible and are impervious to dirt and water.

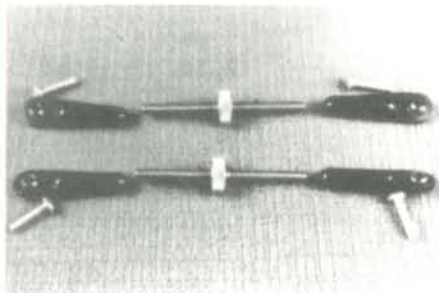
For more information contact A.J. Products, 8470 Heritage Dr., Clarkston, MI 48016.



ELECTRONIC STOPWATCH

Time laps to 1/100 of a second with the new Electronic Stopwatch from Aristo-Craft/Polk's Model Craft Hobbies. Other features include a time/calendar display, 24-hour stopwatch, alarm, hourly chime and a 12/24-hour mode option. (Stock No. ARI8605).

Available in your local hobby shops, or for more information, contact Aristo-Craft/Polk's Model Craft Hobbies, 346 Bergen Ave., Jersey City, NJ 07304. Distributed in Canada by Canadian Hobbycraft Ltd., 24 Ronson Dr., Rexdale, Ontario, Canada M9W 1B4.



ADJUST-A-LINK KIT

This Adjust-a-link kit is complete with ball joints and hardware. Allows adjustments while steering links remain on car.

Complete information on all BoLink's products is available by sending \$3 for their latest catalog and price sheet and a FREE "He Who Dies With The Most Toys" bumper sticker.

For more information contact BoLink R/C Cars, Inc., 420 Hosea Rd., Lawrenceville, GA 30345.



MINICRAFT R/C TANK KIT

Minicraft recently released a 1/25-scale motorized tank kit, the World War II German Jagdpanzer. Originally designed to operate as a wire remote-control, instructions for adapting this kit to electronic radio-control have been developed by Minicraft.

The kit contains dual DC motors, gearbox and steering control. By adding a standard-size 2-channel radio-control unit, the tank can be operated as a proportionally controlled R/C model. Its individually molded track segments snap together to form flexible and highly realistic treads. When assembled, the kit is over 16 inches long!

For more information contact Minicraft Models, Inc., 1510 W. 228th St., Torrance, CA 90501.



PDI SHRINK-TUBE

A new shrink-tubing kit from Product Design Inc. features seven 6-inch pieces of shrink sleeving of various diameters. Diameters range from 3/64 inch to 3/8 inch. Materials are of the highest quality—a *must* for every R/C enthusiast!

For more information contact PDI, 16922 N.E. 124th St., Redmond, WA 98052.



BOLINK BODIES

The 1/10-scale Ferrari F40 LeMans is patterned after Ferrari's latest release which marks their 40th anniversary. This body is as detailed as the full-size version, and includes the rear wing.



Relive the era of the factory hot rods with BoLink's latest classic, the 1967/68 Super Sport Camaro. It's a perfect combination for our 1966 Mustang Fastback.

For more information on these, and the entire BoLink line, contact BoLink R/C Cars, Inc., 420 Hosea Rd., Lawrenceville, GA 30245.



MOTOR BREAK-IN

The new Kyosho Motor Break-In Machine is designed to help new motors last longer and run better. By properly breaking in a motor, you shape the brushes correctly, increase the efficiency of the commutator and help prevent arcing. This machine helps you do all of this safely and easily. Simply hook up a 12V or 7.2V power supply and turn it on. The Kyosho Motor Break-In Machine takes over from there. It will feed your motor a low, steady voltage and, in a short time, your motor will be properly groomed for top performance.

The Kyosho Motor Break-In Machine features adjustable voltage output, an easy-to-use meter and all necessary connectors. It measures 4.3 x 1.4 x 3.2 inches.

For more information contact your nearest retailer or Great Planes Model Distributors, P.O. Box 4021, Champaign, IL 61820.



Errata: In our March issue we inadvertently gave an incorrect address for the MCS Parts Washer. For more information on this please contact MCS Products, 502 Price Dr., Lewisville, TX 75067.

Descriptions of new products appearing on these pages were derived from press releases supplied by the manufacturers and/or their advertising agencies. The information given here does not constitute endorsement by Radio Control Car Action, nor guarantee of performance or safety by Radio Control Car Action. When writing to the manufacturer about any product described here, be sure to mention that you read about it in *Radio Control Car Action*.



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RAIDER

(Continued from page 114)

servos. Since this is a Kyosho product, it fits easily. The battery pack used is the Kyosho 7.2V, 1,200mAh battery charged with a—you guessed it!—Kyosho Lambda Quick-Charger.

Before starting the assembly, charge

the battery and connect it to the radio system with the servo plugged in and the transmitter turned on. Before attaching the servo saver or speed control, set the trim knobs to center, then turn off the receiver power-switch and the servos will be centered. Then put all this aside until

later.

The assembly begins with the shock absorbers and the front end. The pictorial instructions are of the same high quality as in most Kyosho manuals, but there is the usual lack of written instruction. This

(Continued on page 120)

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Fred Murphy, R/C Car Action Magazine

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"MY RUNAWAY PROBLEM IS GONE!" Richard Shaw

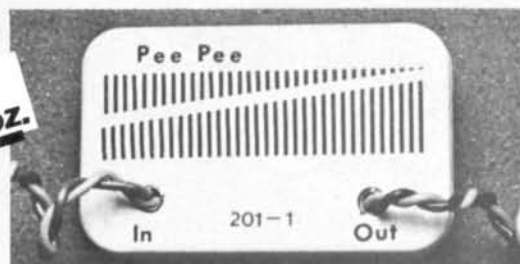
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RAIDER

(Continued from page 118)

is common with Kyosho car manuals, but the excellent diagrams more than compensate. If the pictures are followed correctly, assembly should pose no problems.

First, the front-end assembly is attached to the chassis; then the rear-end assembly

and suspension are assembled and attached to the chassis also. When attaching the motor to the differential housing, follow the diagram on the pinion-gear inspection cover that shows you which holes to place the screws through, depending upon what pinion you use. This

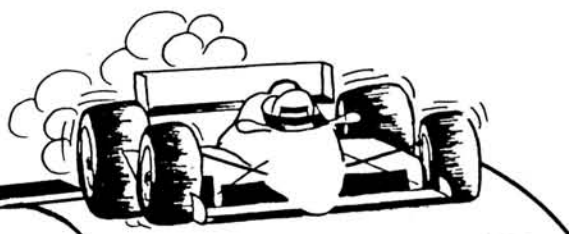
will allow you to change gears to adapt to a variety of tracks.

One notable problem encountered while assembling the rear suspension was the fit of the dog bones (or swing shafts, as they are called in the instruction manual)

(Continued on page 122)

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RAIDER

(Continued from page 120)

in the drive joints. The pins in the swing shafts weren't all round, and that didn't help the fit. As well as that, the slots for these pins were machined off-center, and

this caused the swing-shaft to bind severely. After a good deal of filing on the swing-shaft, the binding was eliminated, but this was a design flaw on this particular kit, and it should have been re-

turned to the manufacturer. This might not be a problem in every kit, but keep your eyes open for trouble in this area.

After the rear assembly is attached to the chassis, the radio must be installed. As previously mentioned, the Kyosho radio system fits perfectly.

I was pleased to see the Raider's new speed control. This unit is similar to the Tamiya-type speed control which has been successful when used with a stock motor. The Kyosho speed control still used on other kits is a printed-circuit board with a thin, metal coating that often burns off when an electrical short occurs.

Having completed the installation of the radio system, all that remains is the assembly of the tires and the painting of the body. Painting the body is very easy because you only have to tape the windows; the rest of the striping is done with the supplied decals. Once the body is complete, you can drop it onto the chassis and do some dirt-burning!

PERFORMANCE: The Raider responded well to the controls; maybe even a little better than most. This was partly due to the superior suspension design. The upper control arms keep the camber

(Continued on page 124)

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RAIDER

(Continued from page 122)

angle consistent throughout the range of the suspension movement. This, along with its suspension geometry, helps the

Raider to go to the head of its entry-level pack. However, the stock raider isn't blindingly superior.

One of the key elements of a top-notch

car is adjustability, and the Raider *can* be upgraded. The car can be tailored to each different track, or even to different conditions on the same track. By designing the Raider to be versatile, Kyosho has bridged the gap between entry-level and bumper-to-bumper modified competition. Prior to the introduction of the Raider, the racer would have to either buy a second car to graduate to a higher level of competition, or fine-tune his driving skills to a point where he could overcome the design flaws of his entry-level car. Only by doing this, could he compete with the more advanced cars.

Since I have yet to attach any of the aforementioned accessories to the Raider, I can only speculate how it will perform when changes are made, but we at RCCA think that this will be a car to look out for from entry-level right up to the highest levels of competition.

When the after-market suppliers get geared up to produce equipment for the Raider—and they most surely will—look out! And look out for "Project Raider" in a future issue of RCCA.

**The following is the address of the manufacturer featured in this article:*

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FOX

(Continued from page 74)

any chance of entanglement with the other cars on the track. If your car has to be separated from another car by the marshalls, this loses precious time and can cost you the race.

Stock speed controls leave a lot to be desired. They usually have three forward speeds, resistors, yards of wire, and are generally unreliable. When I began racing, I studied the winning cars and found that they all had electronic speed controls. I was dismayed at the high cost of these

(Continued on page 132)

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but, with a strong desire to win, I tried just about every after-market speed control there was. I finally broke down and bought an electronic one. What a dif-

ference! It eliminates about half the wiring, the throttle servo, resistors and BEC, and so reduces weight too. You gain more control, and the controller can be adjusted to suit individual tastes.

When using a stock speed control, you have three speeds. Going from second to third speed creates a power surge that causes the tires to break loose and so causes your car to spin out and lose precious time. This is comparable to jamming the gears from first through fourth on a stick-shift car without depressing the clutch.

With an electronic speed control you get full, variable control. This means that as you pull the trigger you get a smooth power increase without a surge. I used many different speed controls before finally buying an electronic one.

The best mechanical controller has a resistive bar, but this burns out quite frequently when used with a hot motor. Regular replacement of the mechanical type can soon cost as much as a new electronic speed control, so where are the savings?

One thing to remember is that you will lose reverse with many electronic speed controls. However, in racing, reverse is illegal in top classes anyway. I think that the best racing investments I made were a KORM7 (their best model) in conjunction with an EX-9 radio. Under extreme

(Continued on page 134)

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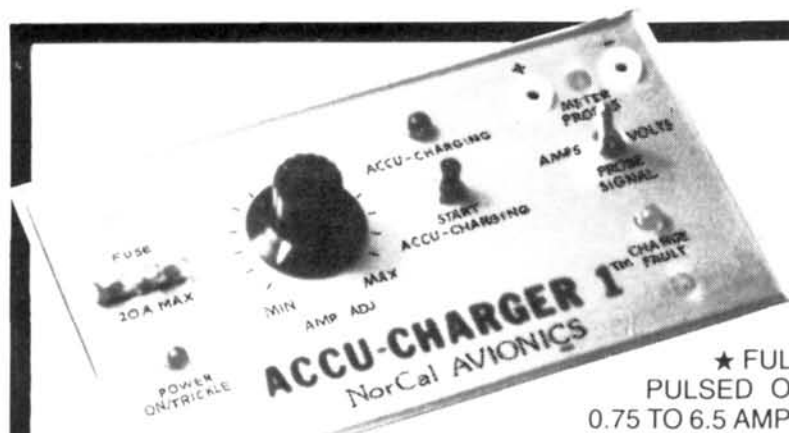


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FOX

(Continued from page 132)

racing conditions, these have performed flawlessly.

Before getting to the rear end, I have one more recommendation that costs nothing but a little time, and this is to cut a hole for the dreaded crystal changes. This

is a horror for Fox owners because you have to take the car apart to accomplish it. This doesn't work for all applications, but with a KO EX-9 you can use a Dremel tool to cut a hole in the center of the receiver box under the battery compartment. This makes changes a breeze,

as you can then use long-nose pliers or hemostats to remove the crystals.

Now for the gearbox. I've just begun to experiment with Thorp's* adjustable differentials. During my last winning season, I used stock gears and added Thorp's dog-bone system. I did this not to improve durability but to produce a gearbox which would run more freely and produce more power with less resistance.

There are quite a few companies manufacturing great motors. Trinity's* Monster Stock and Pure Gold gave me great success, while being consistently among the fastest.


The best tires are Supershot pin-spikes for both the front and the rear. The front tires must be glued to the rims. If you're not using a Thorp differential in the rear, don't glue the rears. This might sound weird, but the rear tires will slip on the rims and act somewhat as a slip-differential. I found this out at the Region 3 Championships. Because I had glued the rear tires (never thinking that the tires would slip on the rims), all I did was spin out. I had to go back to the tires I used for the previous race. Not gluing them gave me two more laps.

(Continued on page 136)

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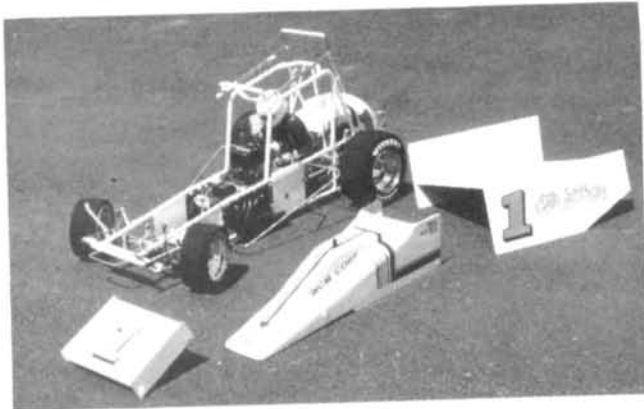
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FOX

(Continued from page 134)

As for the shocks, the stock ones are more than adequate if set up correctly. I found that the best setting was the dual-hole piston with 30WT oil, using no spacers in the front shocks and small spacers in each of the rear ones. This might seem to be too soft in the front but, with most of the weight being in the rear, the front has to be soft to work. I've seen many Foxes run at the track with front ends too stiff, resulting in a hard-to-steer, very bouncy front end.

I've been testing Brimrod shocks, and these are the finest shocks I've ever seen. When using these, you need the race-prep rear-shock tower because the shocks are longer. For the front, you'll have to remove the stock rod and use Associated's* rear 135-stroke shock-rod, using the right length for a Fox and also using a rear spring. This will give the front end another inch of clearance.

This combination has proven its durability and winning potential in the many races in which I've participated. In 1986, I won the stock-class point standings with a full string of victories at JOROCC. I was also the only racer who didn't drive

(Continued on page 138)

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(Continued from page 136)

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Thorp Manufacturing, 380 S. East End, Unit

Associated Electric Inc., 3585 Cadillac Ave.,
Costa Mesa, CA 92626. ■

(Continued from page 90)

The next truck up from the bottom was the Tamiya Bruiser with an average E.T. of 9.87 seconds and an average top speed

The runner-up was the Marui Big Bear with a 9.6-second average at 14.53mph. Taking 1st place in the acceleration and top-speed test was the Tamiya Blackfoot with the fast E.T. of 6.38 at 15.52mph.

Handling

For the handling portion of our testing, the action moved to the off-road track at Universal Supplies. This was the site of the Winternationals in '86.

Each truck was tried out at the off-road section of the track with three different batteries to lessen the possibility of a bad battery skewing the results. I'll spare you the numbers for each lap on all of the trucks, but I'll give you the order of finishing and the average lap time.

From the bottom up, the MRP High Roller finished 9th with an average lap time of 34.09 seconds. This wasn't the result of poor handling; it was the result of a very low gear ratio that is for pulling and climbing.

Next from the bottom came the Tamiya Bruiser. The Bruiser was run in the two-wheel high-speed gear, because running in this gear seemed to produce the best results. Despite this, the Bruiser's heavy weight and the tall gear ratio could only push it to an average lap time of 28.46.

The Big Bear, placing relatively low for a 2WD, took 7th place with a lap time averaging 23.14 seconds.

The last of the four-wheelers, the Clod Buster, came in with the best average time of 23.10 seconds for 6th place. Not too much faster than the Clod Buster was the Midnight Pumpkin with an average time of 22.86—just a hair slower than its brother, the Lunch Box, which had a 22.98-second average. The small size and low weight of these two trucks would normally translate into much faster lap times, but the chassis of both are designed

(Continued on page 148)

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SHOOTOUT

(Continued from page 138)

to wheelie. This feature makes cornering much more difficult than is usual. In fact, to navigate the tight corners in a respectable time, we actually had to flip the throttle to the reverse side for a moment to swing the rear end around.

The Blackfoot placed 3rd, with an average time of 21.13 seconds. With its spiked tires, the Monster Beetle from Tamiya was able to get a better bite on the ground, taking 2nd place with lap times averaging 20.72.

Winner of the handling contest was the

Big Brute from Kyosho with the best time of 19.03. It has four-wheel independent suspension, so perhaps its success was to be expected.

Duration Test

The final part of truck-testing included the amount of time each vehicle would run at full speed with a variety of 7.2V 1,200mAh battery packs. We know that batteries aren't identical, but by changing the battery packs for each truck a number of times, we were able to obtain the most accurate results. At the bottom of the list came the Bruiser, with its heavy chassis and tall gear ratios in 2WD high. Its

average run time was 8.04 seconds.

Just ahead of the Bruiser was the Kyosho Big Brute with the performance LeMans motor and an average run time of 9.33. The soft tires and the tall gears gave the Marui Big Bear an average time of 11.05 and a 7th-place finish.

The Monster Beetle and the Blackfoot were close, but the smoother tires of the Blackfoot gave it an average time of 11.49 for 5th place, while the Monster Beetle just nosed out the Big Bear with an average time of 11.06 for 6th place.

Placing amazingly high was the dual-motor Clod Buster from Tamiya. The extra motor seemed to pick up quite a bit of work, and this kept the load down and increased the duration. The Clod Buster finished with an average of 13.07!

The 3rd and 2nd spots went to another pair of Tamiya trucks—the lightweight Pumpkin and the Lunch Box. These finished with average times of 14.55 and 14.47 seconds respectively.

That only leaves the High Roller in the number-one spot for the duration testing. With its incredibly low gearing, the High Roller motor never took a heavy breath, and its average run time was 19.25! Keep in mind that these times are the result of full-throttle operation with no slowing down for corners or speeding up for the straightaways. Both slowing for corners and speeding up for the straightaways take their toll on length of run times.

Manufacturer's

Suggested Retail Price

The last numbers to be calculated into the testing are the suggested retail prices. We all want to know what we're getting for our modeling bucks, so it was important to figure price into the final standings. The most expensive truck in our tests is the Tamiya Bruiser at \$394. It has a 3-speed transmission and a steel frame. Had there been a contest for scale appearance, I'm sure that the Bruiser would have tucked away the winner's share of the points. The steel-channel frame and incredibly detailed body make the Bruiser a convincing 1/10-scale look-alike.

Less expensive than the Bruiser is the High Roller from MRP with a suggested retail price of \$379.95. Because of its price and specialized design, the High Roller didn't place well in the overall standings, but the kit has many good qualities. The High Roller, more than any of the other trucks, is the bearer of the palm when it comes to scale performance. It's the only truck of the fleet that is able to float on water; it has excellent climbing ability and runs the closest to scale speed. (How many times have you seen a

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Rules for the Quadra/Super Lube Quarter Flash Nationals will be run under the International Remote-control Racing Organization in Quarter-scale. All classes will be run, including Funny Car, Top Gas Funny Car, Top Alcohol Car, Top Fuel Funny Car, Dragster, Top Gas Eliminator, Top Alcohol Eliminator, Top Fuel Eliminator, as well as home-builts and jet-powered dragsters in the Experimental class.

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For more race information contact the I.R.R.O.Q. at
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monster truck do 150mph!)

Placing seventh in the price war is Clod Buster from Tamiya with a suggested retail price of \$305. Not only is the Clod Buster the biggest monster truck, but it's also the best performer of the 4WD group. It won the sled pull, had competitive lap times of 23.10 seconds, a top speed of 10.20mph, good acceleration and a respectable run time for a dual-motor monster.

Number six on our price list is the Tamiya Monster Beetle at \$178.50. The Monster Beetle is the most expensive of the 2WD trucks, and for this reason, it took a back seat to the rest of the 2WDs in the final standings. This doesn't mean that the Beetle is a bad performer, but just that you get more performance for the buck with the other 2WD kits.

Not too far behind the Monster Beetle in the price standings is the Kyosho Big Brute. The Brute, which is the biggest of the 2WDs, ironically handles better than the others. Much of its success is due to its independent suspension and to a LeMans 05 Stock motor which gives it a little more push. The Big Brute placed well in the other events too, with the exception of the duration test. The more powerful LeMans motor drained the battery in just under nine-and-a-half minutes.

The Tamiya 1/12-scale Midnight Pumpkin is one rung above the Big Brute with a lower suggested retail price of \$140.50. The Pumpkin did relatively well in all the tests, and even pulled more weight than its bigger 2WD brothers. Had there been a wheelie contest, the Pumpkin and the Lunch Box, which are similar, would have ridden a wheel-stand right to first place. The tendency to wheelie is one of the factors that held back this lightweight mini-monster in the handling portion of the test.

Number three on the list of most economical is the Tamiya Blackfoot for \$125. The Blackfoot took the checkered

flag in the acceleration and top-speed portion of the testing, and had it not been for its poor sled pull, it may just have taken first place in the overall standings.

Just a week's allowance ahead of the Blackfoot is the Tamiya Lunch Box at a price of \$117. As mentioned before, this truck does tremendous wheelies, and these may hurt your performance, but they really serve up some laughs.

The lowest-priced truck of the fleet, as well as the first-place finisher in the overall standings, is the Big Bear from Marui. This truck didn't take first place in any of the events, with the exception of price, but it consistently placed well enough to give it the overall win; the best bashing for the buck!

Scoring

For those of you who haven't figured out the scoring system, let me show you how it works. If you're still in school, our scoring system resembles your teachers' gradings when they grade your tests on a curve. It means that the highest score gets the A, or the 100 points, and the rest of the scores are calculated as a percentage of the top score. As an example, let's say you get an 80 on your math test and it's the highest grade in the class. If it's graded on a curve, you'll receive 100 points, as our top-place finisher did in each event. Let's also say that the person next to you in math class gets a 40 on the same test. This is half of your 80, so this student would score half of your 100 points, which would be 50. This is how the trucks were scored.

The reason for scoring on a curve and in the 0-to-100 range is to make sure that no single event would account for a disproportionate portion of the scoring. Remember, also, that the final standings are the sum totals of all the features that we thought we should test to find the ideal monster truck. If there are tests of features that aren't relevant to you when you choose a truck, then just add up the scores

that you feel are important, and decide for yourself which would be the ideal monster for you!

**Here are the addresses of the companies mentioned in this article:*

Universal Hobby & Supply, 7021 Municipal Dr., Orlando, FL 32809.

BoLink R/C Cars, Inc., 420 Hosea Rd., Lawrenceville, GA 30245.

Wallkill Wheels Raceway & Hobbies, 60 Main St., Walden, NY 12586.

MRC/Tamiya, 2500 Woodbridge Ave., Edison, NJ 08817.

MRP, 18676-142 Ave. N.E., Woodbinville, WA 98072.

Kyosho, Box 4021, Champaign, IL 61820.

Marui. Distributed by Model Expo Inc., 23 Just Rd., Fairfield, NJ 07007.

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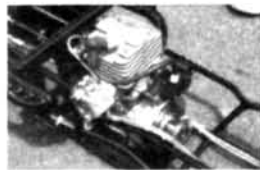
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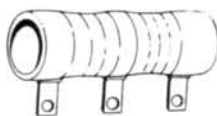


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